

Borough of Eastbourne.



ANNUAL REPORT

FOR 1893,

OF THE

VITAL STATISTICS,

SANITARY WORK, Etc.

REGINALD DUDFIELD,

A.M., M.B., \bar{e} Coll. S.S. Trin., Cantab.,

D.P.H., Camb.

Medical Officer of Health.

Eastbourne :

Printed by V. T. SUMFIELD Steam Printer & Lithographer, Station Street.

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*With the Medical Officer of Health's
Compliments.*

Eastbourne. 3rd July 1894

ERRATA.

Page 5, Table iv., for "tenants" read "tenements."

„ 23, line 5 from bottom, for "reseverations" read "reservations."

„ 23, line 13 from bottom, for "idiopathic" read "idiopathic."

„ 24, line 7 from top, for "idiopathic" read "idiopathic."

„ 24, line 11 from top, for "disease" read "diseases."

„ 24, line 27 from top, for "infected" read "affected."

„ 25, line 7 from top, for "gentlemen" read "gentleman."

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APPENDIX.

Tables of Society of Medical Officers of Health.

Report by Medical Officer of Borough Sanatorium.

BOROUGH OF EASTBOURNE.

SITUATION.—Latitude $50^{\circ} 46'$ N.; Longitude $0^{\circ} 17'$ E.

ELEVATION.—Varies from 140 feet above (at West End) to 4 feet below high water mark (in the East of the Borough).

SLOPE.—From West to East. ASPECT.—South and South-East.

AREA.—Of the Borough 5,410 Acres; of the Town (about) 900 Acres.

DENSITY OF POPULATION.—For the Borough 7·2 persons per acre; for the Town, 43·3.

NO. OF INHABITED HOUSES.—At Census (April, 1891) 5,190; on 31st December, 1893 (estimated) 5,773.

POPULATION.—Census (1891) 34,969; Estimated at the middle of 1893, 39,020.

BIRTH-RATE.—(1893) 22·99 per 1,000.

DEATH-RATES.—(1893) From All Causes, uncorrected, 14·76, and corrected, 12·76 per 1,000 persons.

Infantile, 144 per 1,000 births.

Zymotic, 3·71 per 1,000 persons.

MEAN ANNUAL TEMPERATURE.—(1893) $51^{\circ} 6'$.

HOURS OF BRIGHT SUNSHINE RECORDED.—(1893) 1928·2.

TOTAL RAINFALL.—(1893) 29·31 inches.

*To His Worship the Mayor and Corporation of the
Borough of Eastbourne.*

GENTLEMEN,

I have the honour to submit my Report for the year 1893. Owing to pressure of work, its issue has been delayed, but whilst regretting the delay, I can only say that it was unavoidable.

During the year the compilation of the vital statistics from 1881 up to 1893 has been completed, and the results recorded in a special "ledger." The statistics have been based on the calendar months throughout, not on the weeks. Prior to 1883, "Norway" was not included in the Sanitary District "Eastbourne," and the returns for that portion of the Borough prior to 1892 have been neglected. The error thus introduced is exceedingly small, and, in the rates, is not greater than the second place of decimals. The rates throughout have been calculated on estimated populations based on the actual growth between 1881 and 1891.

The year 1893 was a remarkable one, and, on the whole, a striking illustration of the fact that "seasonable weather," *i.e.*, weather of marked extremes, is not healthy. Tables 4 and 11 in the Appendix are worthy of perusal, and will give an idea of the connection between extreme meteorological conditions and mortality statistics. Unfortunately I am not in a position to enter more fully into this subject, nor to deal with the Reports on Death Certification and Meat Marking, as I wished to do.

In concluding this my last Report, I desire to record my appreciation of the manner in which the Sanitary Staff have, one and all, done their duties. The inquiries in connection with the outbreak of measles entailed a very large addition of work in excess of the routine

duties. I do not think it is presumptuous to claim that the vigilance of the Department did check the spread of disease last year, although I must confess that the limits imposed were by no means as narrow as I could have wished. My colleagues in the Medical Profession have been most unselfish in their assistance during the past year, and much valuable information has been received from them.

I have the honour to be, Gentlemen,

Your obedient Servant,

REGINALD DUDFIELD.

Town Hall, Eastbourne,

20th April, 1894.

THE BOROUGH.

In my Report for 1892, (page 1) the area of the Borough was stated to be 5,450 acres, that being the area given in the Census Report for 1881. In the Census Report of 1891, the area is stated to be 5,410 acres, and the Borough is there shown to comprise portions of two registration sub-districts, viz :—

Registration District, 70—Eastbourne.

Sub-district, 1—Westham.

	Willington, part of	Acres. 655
Sub-district, 2—Eastbourne.		
	Eastbourne, ...	4,755
		<hr/> 5,410

No reason is given for the reduction (40 acres) made in the area.

The name Eastbourne in the Census Return, may mean one of three districts ;

- (1) The Registration District, No. 70, having an area of 36,538 acres and a total population 41,226 persons.
- (2) The Registration Sub-district, No. 70 : 2, with an area of 17,476 acres and a population of 37,468.
- (3) The Borough (or Sanitary District), containing 5,410 acres and 34,969 persons.

Such a multiplicity of meanings will indicate some of the difficulties in getting out information from the Census Report.

I may add that in the Registrar General's Quarterly Reports, the returns tabulated under "Eastbourne" are those for the Registration Sub-district 70 : 2.

Portions of the census returns only are tabulated for sanitary districts, and I have found it impossible to make complete series of tables for purposes of comparison. The complication between civil parishes, ecclesiastical districts, sanitary districts, and registration areas, is an enigma which can only be solved by one having an accurate knowledge of the whole country. It is quite time that the information afforded by the census returns should be primarily tabulated in reference to one unit, *e.g.* the sanitary district, and that all other tabulation should be subsidiary and supplemental. I say the

sanitary district because the duties of the Medical Officer of Health require him to give special attention to the analysis and comparison of vital statistics, and it should be possible to pass from the sanitary districts to the county, and from the county to the country as a whole.

POPULATION.

The analyses of the census of 1891 contained in my report for 1892, were based on provisional returns, liable to alterations during the final revision. I find, however, that the tables in the Census Report agree in every respect with the provisional returns, and I have no corrections to make to the work of last year.

My estimation of the population of the Borough at the middle of 1893, gave a total of 39,020 persons, an increase of 4,051 persons during the two-and-a-half years that have elapsed since the census. The total of 39,020 was obtained by the use of the ratio of increase between 1881 and 1891. The usual check to such estimate is the number of houses rated as "empty" in June of each year. Such return was not available. As, however, 207 new houses were certified for occupation during 1893, a number greatly in excess of the previous years' totals, it seems fair to assume that there has been no marked diminution in the rate of increase. Most of the 207 houses were artizan and middle class property, houses which generally contain a very liberal allowance of children, and all the old houses pulled down during the year were replaced by two or more new houses—facts which strengthen the supposition of a continued growth equal to that of former years.

Tables I. and II. give the numbers of each sex, and of persons in selected age groups, etc., at the date of the census and at the middle of 1893.

TABLE I.

						Enumerated Population Census, 1891.	Estimated Population, middle of year, 1893.
Persons	...	...	...	...	...	34,969	39,020
Males	...	...	...	...	...	14,665	16,364
Females	...	...	...	...	...	20,304	22,656

TABLE II.

Ages.	Census, 1891.			Estimated, 1893.		
	Males.	Females.	Total.	Males.	Females.	Total.
0—1	344	387	731	383	432	815
1—5	1,354	1,422	2,776	1,511	1,587	3,098
Total under 5	1,698	1,809	3,507	1,894	2,019	3,913
5—15	3,727	3,685	7,412	4,159	4,112	8,271
15—25	2,848	5,161	8,009	3,179	5,759	8,938
25—65	5,786	8,771	14,557	6,456	9,787	16,243
65 and upwards	606	878	1,484	676	979	1,655
25—60	5,465	8,293	13,758	6,098	9,254	15,352
60 and upwards	927	1,356	2,283	1,034	1,514	2,548

The age groups '25-60' and '60 upwards' are given on account of the sub-division of ages in the Local Government Board Tables (vide Table A, and B, in the Appendix).

The estimated population under 1 year of age, as seen in the preceding table, was 815 (viz :—383 males and 432 females). The excess of births over deaths (under 1 year) between July 1st, 1892, and June 30th, 1893, was 743 (viz :—389 males and 354 females). Setting aside all consideration of emigration and immigration, these figures appear to indicate that the growth of population has remained practically unchanged since the census.

The Borough is for sanitary administration divided into three districts, containing the following estimated populations :—

TABLE III.

Sanitary District.	Males.	Females.	Persons.
East	6,490	7,027	13,517
Central	4,706	7,012	11,718
West	5,168	8,617	13,785
Totals	16,364	22,656	39,020

DENSITY OF POPULATION.

The area of the Borough being 5,410 acres, it follows that in 1893 there were 7·2 persons per acre, as compared with 6·4 at the census, and 6·8 at the middle of 1892. A large portion of the area is, however, still arable land, the town itself occupying an area which is estimated to be about 900 acres. The true density of the population is therefore (approximately) 43·3 persons to the acre, which gives an area of 0·23 acre (about 111 square yards), to each person. Assuming these figures to be correct, each person is theoretically separated from the other by a lineal interval of 31 ft. This interval is the measure of 'proximity' or 'propinquity' of the population. The freedom of intercourse between individuals depends on their 'propinquity,' and similarly infectious diseases have greater opportunity for spreading from person to person in proportion as the proximity is greater (*i.e.* as the measure is less). I have in preparation a table of various towns and districts for which this factor has been calculated, and it is my intention to obtain information as to the death rates from all causes and from certain diseases, and thus to endeavour to learn how far density and propinquity affect the health of the population.

HOUSING OF THE POPULATION.

At the census 5,190 inhabited houses were enumerated containing 6,242 families in 6,246 tenements. But before proceeding to examine these figures it will be well to ascertain the meanings attached to the terms 'house,' 'tenement,' and 'family.' As regards the two first, the instructions given to the enumerators are stated to have been as follows:—

“ According to the instructions issued by us for the guidance of the enumerator, *all*
 “ *the space within the external and party walls of a building* was to be considered a
 “ separate house, by however many families, being in distinct tenements or apartments,
 “ it might be occupied. By a tenement was to be understood *any house or part of a*
 “ *house separately occupied either by the owner or by a tenant*; and a separate
 “ schedule was to be given to the occupier of each such tenement.”

[Census Report, 1891, Vol. IV.]

The term 'family' is not defined in the Report, but from a sample schedule included in the Appendix of Vol. IV. of the Census Report, it is evident that the term was intended to apply to a single individual occupying a separate tenement. It is useless therefore to speculate as to the number of individuals in a family.

Of the 6,246 tenements contained in this Borough 1,852 (containing 4 rooms or less) were occupied by 6,548 persons (an average of 3·5 persons per tenement) and 4,394 (containing 5 rooms or more) by 28,421 persons (averaging 6·4 per tenement). The average number of inhabitants per *house* was 6·7. These figures would, therefore, *appear* to indicate that 4,394 houses constituted separate tenements, and that the 1,852 tenements of less than 5 rooms were contained in 796 houses. Table IV. gives the number of each class of tenement, the total number of persons enumerated as occupying them and the percentage of the population in each case, and Table V. contains a full analysis of the tenements and their inhabitants.

TABLE IV.

No. of rooms to a tenement.	No. of tenements enumerated.	Population.		Overcrowding.	
		No. of persons inhabiting the same.	Equivalent to—% of total Population.	No. of tenants over- crowded.	Percentage of total population overcrowded in each class of tenement.
1	376	644	1·89	70	0·71
2	525	1,569	4·48	82	1·44
3	363	1,522	4·35	46	1·03
4	588	2,793	7·98	20	0·52
5 or more	4,394	28,421	81·27	not ascertainable.	
Total ...	6,246	34,969	100·0	218	3·73

TABLE V.
From Census Report, 1891.
Eastbourne Urban Sanitary District. Total number of tenements 6,246; total population, 34,969.

No. of rooms per tenement.	No. of tenements.	Total occupants enumerated.	No. of tenements containing occupants.											
			1	2	3	4	5	6	7	8	9	10	11	12
1	376	664	199	107	38	25	5	2						
2	525	1,569	65	180	115	83	51	17	6	5	2	1		
3	363	1,522	15	73	68	58	56	47	22	14	5	3	2	
4	588	2,793	15	62	98	101	112	85	59	36	15	5		

No. of tenements of 5 or more rooms, 4,394.
No. of occupiers of same, 28,421.

NOTE.—Heavy zigzag line indicates the distinction between un-crowded (on left of line) and over-crowded (on right of line) tenements, the standard being two occupants per room.

The average number of inhabitants in each tenement is as follows :—

Of tenements containing 1 room,

Average number of occupants 1·7, or 1·7 per room ;

Of tenements containing 2 rooms,

Average number of occupants 2·9, or 1·4 per room ;

Of tenements containing 3 rooms,

Average number of occupants 4·1, or 1·3 per room ;

Of tenements containing 4 rooms,

Average number of occupants 4·7, or 1·1 per room.

It is evident from these figures that over-crowding, if existing, is less acute in the larger tenements than in the smaller. But these figures do not tell the whole truth. Many of the tenements are occupied by single persons, *e.g.* of one-roomed tenements 199 have single occupiers, of two-roomed tenements, 65, etc. (vide Table V.) It is necessary, therefore, before we can gauge the over-crowding existing, to fix a standard and by means of Table V. to calculate the amount for each class of tenement. The standard adopted by the Registrar General is 2 persons per room. On this point he writes as follows :—

“We must first, however, define what we are to take as a standard of over-crowding. It is plain that the number of rooms and occupants is not itself an absolutely sure guide, because rooms differ largely from each other in size. Still we may be tolerably certain that the rooms in tenements with less than five rooms will not, in any but exceptional cases, be of large size, and that ordinary tenements which have more than two occupants per room, bed rooms and sitting rooms included, may safely be considered as unduly over-crowded.”

(Census Report, 1891, Vol. IV.)

Using 2 persons per room as the limit for un-crowded occupation, I have calculated the amount of over-crowding existing in the Borough at the Census. There were at that date 70 1-roomed, 82 2-roomed, 46 3-roomed, and 20 4-roomed tenements containing more than 2 persons per room. Of the total population 3·73 per cent. were living under conditions which “may be safely considered as unduly over-crowded” (see Table IV.) As regards the effect of such over-crowding on health, it is impossible to speak mathematically. Under certain circumstances 2 person per room might constitute over-crowding dangerous to health, and on the other hand, a larger number might occupy a given room with impunity. Cleanliness, efficient ventilation,

abundance of air space round the tenement, free exposure to direct sunlight, absence of damp, etc., are all important factors which require to be considered in dealing with over-crowding.

The percentage of the population living in over-crowded conditions may be assumed for present purposes as the index of over-crowding, and I have calculated that percentage for several towns. It is necessary to be careful to select towns under approximately similar conditions before hazarding any comparison. From a table I have constructed I select the following towns, which are all health resorts and as far as I know have no special trade or manufacture to attract the class of persons most prone to over-crowd. The figures for England and Wales, etc., are added as indices of the over-crowding in the country at large.

England and Wales...11·23 per cent. of population over-crowded.

Urban Districts	...12·31	ditto	ditto	ditto
Rural Districts	... 8·45	ditto	ditto	ditto
London	...23·77	ditto	ditto	ditto
Eastbourne	... 3·73	ditto	ditto	ditto
Bath	... 6·06	ditto	ditto	ditto
Bournemouth	... 2·00	ditto	ditto	ditto
Brighton	... 4·51	ditto	ditto	ditto
Dover	... 2·50	ditto	ditto	ditto
Folkstone	... 2·34	ditto	ditto	ditto
Hastings	... 3·74	ditto	ditto	ditto
Lowestoft	... 0·69	ditto	ditto	ditto
Margate	... 2·61	ditto	ditto	ditto
Ramsgate	... 2·64	ditto	ditto	ditto
Ryde...	... 0·37	ditto	ditto	ditto
Scarborough	... 3·01	ditto	ditto	ditto
Southport	... 3·12	ditto	ditto	ditto
Torquay	... 5·54	ditto	ditto	ditto
Ventnor	... 0·12	ditto	ditto	ditto
Weymouth	... 2·77	ditto	ditto	ditto
Worthing	... 1·16	ditto	ditto	ditto

As a county, Sussex has an over-crowding index of 2·90, only three other counties having lower indices. The lowest county index in England and Wales is 2·58 (Hampshire), the highest, 38·69 (Northumberland.)

MARRIAGES.

The Registrar informs me that 249 marriages took place during 1893, which number is equivalent to a rate of 6·38 per 1,000 population.

BIRTHS.

During the year 897 births were registered, of which 478 were boys and 419 girls. The birth-rate was 22·99 per 1,000, a decrease of 5·42 per 1,000 from the average rate which prevailed between 1883 and 1892. The male births were numerically 69 below the corrected decennial average, and the female, 121. The first quarter's returns during 1893 were higher than either of the other three, the numbers registered diminishing to a minimum in the fourth quarter. Comparing the numbers registered in each of the four quarters with the corrected decennial average for each quarter, it appears that the fourth quarter was marked by the greatest deviation from the average—a reduction of 57 (fourth quarter, corrected decennial average, 264, number registered in 1893, 207).

The 897 births registered included 40 illegitimate children, equal to 4·4 per cent. of all births registered. The number of illegitimate births registered in 1892 was 33, and the rate per cent. of all births registered, 3·6. The rate for 1893 shows, therefore, an increase of 0·8 over that of 1892.

No information is, under the present arrangements, afforded as to locality of birth, or station in life of parents. Further it must be noted that these figures deal with the number of births registered during the various periods and not with the number of children born. The interval elapsing between birth and registration varies from a few days up to six weeks, the maximum delay allowed by law. It is necessary to remember this when naming February as the month of maximal birth-rates, and August as the month of minimal rates. It is probable that the maximum and minimum numbers of births take place in January and July respectively.

VACCINATION.

No statistics are available for the Borough, but the returns for the civil parish of Eastbourne have been taken as approximately representing the amount of vaccination done within the Borough.

By the courtesy of the Vaccination Officer—Mr. J. Nicholls—I am able this year to include a series of returns from 1883 to 1892, and the provisional return for the first half of 1893.

TABLE VI.

VACCINATION RETURNS FOR EASTBOURNE (CIVIL PARISH) FROM THE
“ SUPPLEMENTAL RETURN ” OF EACH YEAR.

Year.	Births Registered.	Successfully Vaccinated.	Percentage of Children Born.	
			Vaccinated.	Not Accounted for.
1883	890	699	78·54	4·60
1884	935	692	74·01	10·69
1885	1002	650	64·87	9·98
1886	984	631	64·12	9·14
1887	902	477	52·88	18·84
1888	864	371	42·94	30·90
1889	879	270	30·71	49·34
1890	828	166	20·04	58·93
1891	934	194	20·77	62·63
1892	969	224	23·11	57·59
January—June, 1893 }	485	95	19·58	65·15

During the ten years 1883—1892 9,187 children were born, and 4,374 were successfully vaccinated—equivalent to 47·6 per cent. This is not an exact measure of the protection enjoyed through vaccination by children under 10 years of age, because so many died before vaccination, many vaccinated have died since from various causes, and many, both vaccinated and unvaccinated, have left and come into the Borough.

On looking over the file of returns, I found that 1882 was the year with the highest percentage of successful vaccinations (84·48 per cent.), since which date the percentage has steadily diminished. 1881 was the year of the great epidemic of small-pox in London, and doubtless that outbreak encouraged vaccination here.

NOTIFICATIONS.

The cases of infectious disease "notified" during 1893 amounted to 335, which total gives an uncorrected sickness rate of 8·58 per 1,000 population, a rate only exceeded by that of 1890, the first year of "compulsory notification." The diseases notified included Diphtheria (58 cases), Erysipelas (41 cases), Scarlet Fever (218 cases), Enteric Fever (16 cases), and Puerperal and Relapsing Fevers (1 case each). Table 7 in the Appendix sets forth the quarterly and yearly totals for each year since 1890.

The 335 cases notified were distributed among the Sanitary Districts of the Borough as follows:—Eastern District, 137 cases; Central, 81; Western, 117. It will be noticed that Table VII. indicates the Central District has enjoyed a marked immunity from infectious disease during the year past.

TABLE VII.

Notification.	Sanitary Districts.			The Borough.
	East.	Central.	West.	
Diphtheria	23	13	22	58
Scarlet Fever	90	53	75	218
Enteric Fever	6	5	5	16
Puerperal Fever	1	—	—	1
Erysipelas	17	9	15	41
Relapsing Fever	—	1	—	1
Totals	137	81	117	335
Sickness-Rate 1893	10·13	6·91	8·49	8·58
„ „ 1892	4·41	5·86	5·36	4·81

One result of the systematic inquiries made into the cases of disease notified was to disclose the fact that in 26 cases (diphtheria 4, scarlet fever 18, enteric fever 4), the victims brought the disease with them, and to trace 21 cases directly to these (diphtheria 2, scarlet fever

18, and enteric fever 1). In 12 instances, the course of the cases under treatment showed that the first diagnosis was an erroneous one. By applying these corrections, the corrected sickness-rate is found to have been 7.2 per 1,000.

HOUSE DISTRIBUTION.

The total number of houses infected during the year was 237, of which number 60 had, in the course of the year, 2 or more cases, the intervals being very various.

A. From 37 houses, two cases were reported:—

Cases of the same disease at 29 houses.					Cases of different diseases at 8 houses.		
Scarlet Fever	...	...	...	23	Erysipelas and Scarlet Fever	...	1
Diphtheria	...	...	...	4	Scarlet Fever and Erysipelas	...	2
Enteric Fever	...	...	...	1	Diphtheria and Scarlet Fever	...	3
Erysipelas	...	...	...	1	Enteric Fever and Diphtheria	...	1
					Enteric Fever and Scarlet Fever	...	1

B. From 15 houses, three cases were reported:—

All one disease—14 houses.					Various diseases—1 house.	
Scarlet Fever	...	...	...	11	Diphtheria (1 case), Scarlet Fever (2 cases).	
Diphtheria	...	...	...	3		

C. From 3 houses, four cases were reported, all being cases of Scarlet Fever.

D. From 3 houses, five cases were reported, all being cases of Scarlet Fever.

E. From 2 houses, six cases were reported, all being cases of Scarlet Fever.

Out of the 51 instances in which the same disease occurred more than once, in 20 the infection was either simultaneous, or what for the present purpose is the same thing, the cases were not reported (or discovered) until some time after the first case had sickened and the infection had spread to the rest of the household owing to the

absence of proper precautions. In 10 instances the secondary cases were due to infection received from the primary case kept at home for treatment. Of the remaining 21 cases, five followed the return of patients from the isolation hospital, and with respect to the remaining 16 the cause of the recurrent infection can only be conjectured.

Out of the total 237 houses in which infectious sickness occurred during 1893, 36 had been previously infected during 1890-92, 34 having had cases in one of the three years only, and 2 in two out of the three years. Of these 36 houses 4 were infected in 1892 with the same disease as in 1893, 4 with other diseases; 3 were infected with the same disease in 1891 as in 1893, and 8 with other diseases; 5 with the same disease in 1890 as in 1893, and 14 with other diseases. The subjoined table gives a full analysis of the infections :—

TABLE VIII.

1893		1892		1891		1890	
No. of Houses Infected.			No. of Houses Infected.		No. of Houses Infected.		No. of Houses Infected.
21	Scarlet Fever	{ Scarlet Fever Diphtherta Enteric Fever	3	Scarlet Fever	1	Diphtheria	9
			3	Diphtheria	4		
			1				
7	Diphtheria			Diphtheria	2	Diphtheria	3
				Enteric Fever	1		
				Erysipelas	1		
2	Enteric Fever					Diphtheria	2
3	Erysipelas			Enteric Fever	1	{ Diphtheria Erysipelas	1 1
1	Puerperal Fever					Diphtheria	1
1	Diphtheria	Diphtheria				Diphtheria	
1	Scarlet Fever			Enteric Fever		Diphtheria	

An inquiry has been made as to sanitary amendments executed in these houses subsequent to 1890 and prior to 1893. It appears that in 16 houses the necessary sanitary arrangements were executed prior to 1893, in 5 during in 1893, in 11 none had been executed (none being required in 3 of these last houses), and 4 houses were undergoing amendment at the time of writing this report.

REMOVALS TO HOSPITAL.

Out of the 335 cases of infectious disease notified, 195 cases were removed to the Sanatorium for Infectious Diseases, equal to 58·2 per cent. of all cases, as compared with 41·9 per cent. in 1892. As, however, the hospital is reserved for cases of scarlet fever, enteric fever, and diphtheria, the true percentages of cases removed were 64·5 in 1893, and 56·9 in 1892,—a very satisfactory increase of 7·6 per cent. Taking the Borough as a whole, 76·1 per cent. of the scarlet fever cases were removed, 31·0 per cent. of diphtheria, and 62·5 per cent. of enteric fever. In the various Sanitary Districts, the highest percentage of cases removed was 94·4—Eastern District, scarlet fever. Reference to the following table will give full information on this subject :—

TABLE IX.

	Sanitary Districts.						The Borough.	
	Eastern.		Central.		Western.			
	R.	P.	R.	P.	R.	P.	R.	P.
Diphtheria ...	7	30·4	7	53·8	4	18·1	18	31·0
Scarlet Fever ...	85	94·4	34	64·1	47	62·6	166	76·1
Enteric Fever...	3	50·0	4	80·0	3	60·0	10	62·5
Total, 1893 ...	95	79·8	45	63·4	54	52·9	194	66·8
Total, 1892 ...	22	44·8	25	56·8	27	69·1	74	56·9

1 case, Relapsing Fever, removed 1893.

1 case, Erysipelas, removed 1892.

R.—No. of cases removed ; P.—Percentage such cases were of Notifications.

Among the cases removed to the Sanatorium the mortality was 3·0 per cent., as compared with a percentage mortality of 8·5 among those not removed. These percentages are calculated on all the diseases notified. If only those diseases which are admitted to the Sanatorium be considered, the respective mortalities are 3·0 and 10·2 per cent. These figures clearly demonstrate the advantage to the individual to be gained by removal to the Sanatorium.

SEX AND AGE INCIDENCE.

Although the cases reported among the females exceeded those among the males by 43, yet the rates per 1,000 for each sex are very nearly equal (males 8·7, females 8·4). The slightly greater sickness-rate among the males hardly prepares one for the remarkable difference in the mortalities. Among the males, the mortality (per cent. of cases notified) was 7·6, among females 3·6 (less than half), and the same inequality is manifested between the death-rates calculated per 1,000 of each sex living (males 0·67, females 0·30) (*vide* Table X. *infra*).

Dividing the cases notified among the six age-groups used in these reports, it appears that the sickness-rates varied last year from a maximum of 20·4 per 1,000 among children aged 1—5 to a minimum 3·0 among persons aged 65 and upwards. The highest rate for a single disease in any one age-group was 14·5 per 1,000—the rate of scarlet fever among children aged 1—5 years.

TABLE X.

Age Groups, &c.	...	...	...	...	0—1	1—5		Total under 5 years.		5—15	15—25		25—65	65 and upwa'ds.	All ages.	Males.	Females.						
						S.	M.	S.	M.		S.	M.						S.	M.				
Estimated population in each Group				...	815	3,098	3,913	8,271	8,938	16,243	1,655	39,020	16,364	22,656									
Sickness-Rates per 1,000 in each Group—S.																							
Mortality per % of cases notified—M.				S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.						
Diphtheria	4.9	33.3	3.8	33.3	3.2	7.4	0.6	...	0.4	...	1.2	...	1.4	12.0	1.5	14.6	1.4	6.2
Erysipelas	3.6	...	0.9	33.3	1.5	16.6	0.3	...	0.5	...	1.4	...	1.8	...	1.0	2.4	1.0	5.8	1.0	...
Scarlet Fever	2.4	50.0	14.5	4.4	12.0	6.3	14.3	...	3.4	3.2	1.2	4.7	...	...	5.5	2.2	5.5	3.3	5.5	1.5
Enteric Fever	0.3	...	0.4	25.0	0.5	33.3	...	...	0.4	25.0	0.6	20.0	0.2	33.3
Puerperal Fever	*	*	*	*	...	*	*	*
Relapsing Fever	*	*	*	*	...	*	*	*
Total Rates				...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

NOTE.— * There was only one case of each of these diseases and the rates were not worth calculating. The cases are included in the Total Rates.

With a view to learn the effect of bad sanitation, each house has been examined after the occurrence of a case of infectious disease. On the results of such examinations the house was classed as 'good,' 'fair,' or 'bad.' Out of the 237 houses examined, 95 were reported to be 'good,' 90 'fair,' and 52 'bad.' In many instances houses classed fair have been put into a completely satisfactory condition, and others underwent such amendments as were necessary to do away with special defects noticed. Of the 52 houses classed 'bad,' 23 were thoroughly overhauled, 8 were partly amended, and the remainder were either in hand or under notice at the close of the year.

DISINFECTION.

Complete disinfection has been carried out after each case of infectious disease, erysipelas cases excepted. In 12 instances only was the work done by the household. In most instances the walls have been stripped, ceilings white-washed, and paint cleaned down. Occasionally the whole house has been sulphured, cleansed, and re-decorated. The small houses in the East Ward have offered some difficulty to satisfactory disinfection. Owing to their construction it has been necessary to limit the work to the hours of daylight for fear of outbreak of fire. In three or four cases it has been necessary to turn the whole family out of the house, whilst the sulphuring was in process. In the absence of any accommodation for families so displaced, they have lodged with neighbours. Such a proceeding is not without risk of carrying infection. The necessary white-washing has been done by the Corporation in three or four instances, a practice which might with advantage be extended. It would, however, entail the engagement of a special staff.

There were during last year fewer complaints of damage to clothing, etc., by the process of disinfection. Apart from damage due to shrinking caused by the moisture of the steam used in the disinfecting apparatus and setting aside the temporary injury due to removal of the 'tabs' from mattresses, my observations lead me to think that the injury to coloured goods complained of is due to the discharge of the colour by the combined action of moist steam and sulphur fumes retained in the folds of the damaged goods. There has been no complaint of any lost articles.

SCARLET FEVER.

There is good reason to believe that the outbreak of scarlet fever which took place during the last year was primarily due to the epidemic of that disease which has prevailed in London during the past two years. The sickness rate for this disease, amounting to 5·58 per 1,000, entitles the outbreak to be called an epidemic. The notification records extending back to 1890, and the returns of deaths from the disease included in the records since 1881, indicate a special freedom from this disease. The last epidemic I can hear of took place in 1862. During the year 1890-93 (inclusive) the mortality from this disease has varied from 1·9 to 5·8 per cent. of known cases, with a mean mortality of 3·0 per cent. Between 1883 and 1892 the highest number of deaths recorded as due to scarlet fever occurred in 1884 and 1888 (2 in each year). Calculating from these figures and the mortality experienced between 1890 and 1893, it appears that the number of cases which may have occurred in 1884 and 1888 would lie between 66 (on a mean mortality of 3·0 per cent.) and 105 (based on the lowest recorded mortality 1·9 per cent.).

The systematic inquiries made have revealed some interesting facts of the manner in which the disease is spread. Mention has already been made of 18 distinct importations that were discovered, and of the 18 other cases which could be traced without any doubt as due to those importations. It is of course impossible to prevent a certain number of such cases. The patient may feel ill, but the symptoms not having sufficiently developed, the case cannot be recognised. It is thought that a few days' change will put all right and so the patient is sent to the seaside. The question of infectiveness during the early stage is a vexed one, and so nothing need be said of the possible risks to passengers travelling in the same compartment. There is, however, another class of importations which I venture to think are inexcusable,—I refer to the cases of patients who are allowed to travel whilst desquamating.

As illustrations of the manner in which the disease is imported into a town, I include here brief notes of certain cases which have come under my notice during the past year.

CASE 1.—B.C. arrived here on March 23rd. She had been ill at home with scarlet fever for about four weeks. The nurse in charge admitted that B.C. was desquamating on the feet when she came here. I was asked to see her on April 4th, and she was removed to the Sanatorium on the same day, (between March 23rd and April 3rd she was going about to all parts of the town). She was in hospital until May 6th, desquamating all the time.

CASE 2. S.L. arrived April 11th. A case of scarlet fever developed at the house where S.L. lodged on April 14th. On April 16th I was asked to see the patients and found S.L. to be freely desquamating. The child had admittedly been ill for some weeks, and the landlady at first stated that S.L.'s parents had written to her saying that S.L. had had scarlet fever, but this was afterwards denied.

CASE 3. M.C. sickened with scarlet fever on August 16th. A relative of the family was visiting the house from August 8th to 14th, sleeping with M.C. After M.C. sickened, the relative gave a history of sore throat, sickness, etc., in herself and other members of her family.

CASE 4. M.V. sickened with scarlet fever on September 11th, the day of arrival in Eastbourne. A doctor was called in on the 16th and the case was notified that afternoon, but the notification did not reach my hands until two days later, owing to the 17th being a Saturday. On the afternoon of 16th, M.V. was removed to London by cab and rail without any precautions. The parent was summoned and fined 40/- and costs.

CASE 5. E.N. returned to boarding school about September 13th. On October 7th and 9th cases of scarlet fever occurred in the school and when the scholars were examined, E.N. was discovered to be desquamating.

CASE 6. A.P. arrived here June 15th. She had been feeling unwell on the 14th. On the 17th she was removed to the Sanatorium with a well defined attack of scarlet fever.

Some of the above cases were reported to the Sanitary Committee, but no prosecutions were instituted as the Committee were advised that the cases did not come within the scope of section 126 of the Public Health Act, 1875. Although only 18 cases were alleged to have received the infection from the imported cases, I think that it is highly probable that there were other cases in which the connection could not be traced.

Several instances have come to my notice of the spread of infection through neglect of such a nature that it seems almost criminal, yet there appears to be no means of dealing with the cases through the Courts. The difficulties in getting convictions under section 126 of the Public Health Act consist in securing reliable evidence and in proving

“ guilty knowledge.” The neighbours are generally ready enough to complain of the spread of infection by the neglect of any family, but they will not come into Court. “ Guilty knowledge ” appears to offer an almost insuperable difficulty to the conviction of individuals under the following circumstances :—

On the 26th of June, the Inspector observed a child in the street licking a sweet. Noticing a peculiar tongue he followed the child home and seeing the state of one of the other children, he got a doctor called in. The result was that all the six children of the family were removed to the Sanatorium in various stages of scarlet fever, one of whom died. To this family, who had been going about the streets for an unknown time in a state of active desquamation, 13 other cases were apparently attributable, and how many more cannot be stated.

To deal with such cases, it is necessary to prove that the parent had a knowledge that his children were ill with an infectious disease and that he wilfully exposed them. It appears to me that the neglect to ascertain that the disease was infectious should be punishable. Medical advice is within the reach of all, even the poorest—and if any of these children had died without a doctor being called in, the law would take cognisance of the neglect. By the neglect to get advice the disease was spread to others yet no legal remedy appears to be obtainable.

There were three other cases similar to this where the disease was allowed to spread from want of care in isolating the first case. In one instance, five cases were traced to the neglected case, in the second, five cases, (three outside the family of the first case) and in the third, four cases.

To want of isolation at home, where there was sufficient accommodation for such isolation to be given, six cases were attributable. Under the present laws, unless a certificate is given that the patient has insufficient accommodation, compulsory removal is impossible. In this case, authority to prosecute was given, but no one would come forward to give evidence, although the neglect of isolation was well and generally known and blamed.

DIPHTHERIA.

This disease showed a further slight decline during the year. The rate for 1893 was 1·48 per 1,000, compared with 1·58 in 1892, and 5·20 in 1891. Of the 58 cases recorded, in six the infection was undoubtedly

imported by the patient, or due to importation in others. There were no groups of cases observed during the year, but an analysis of the information obtained reduces the number of 'independent' cases to 34, I mean that in those cases the infection appeared to be unconnected with other cases.

With a view to ascertaining the connection, if any existed, between diphtheria and rainfall, the 'independent' cases have been subdivided among the months. The maximum number of cases occurring in any month was six (April), and the rainfall that month amounted to 0·13 in., the smallest quantity recorded in any month during the year. In each of the months of May and August, one case only was recorded, the rainfall for each of the months was 0·78 and 0·79 in. respectively. In October a maximum monthly fall was recorded, viz : 5·48 in. and there were three 'independent' cases.

ENTERIC FEVER.

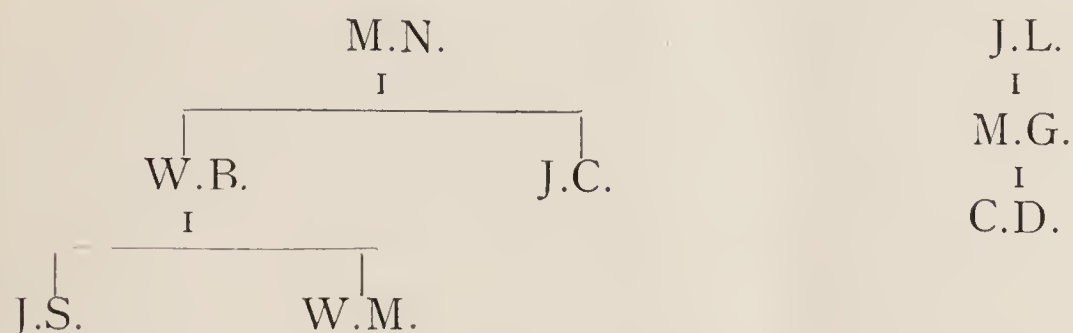
Although 16 cases of this disease were notified during the last year, yet as a matter of fact, the town was exceedingly free from the disease. Six cases were reported during the first quarter of the year, none in the second, eight in the third, and two in the fourth. Of the six cases recorded in the first quarter, one was due to importation. The patient sickened within ten days of arriving in Eastbourne after discharge from hospital where he had assisted in tending a case of enteric fever; three others were removed to the Sanatorium and were found to be other diseases (viz : pneumonia, two cases, and pleurisy, one case) and the other two were dealt with at home, one dying. The fatal case was certified by the same doctor who sent in the three cases already referred to, and I venture therefore the doubt to accuracy of the diagnosis. Of the cases recorded during the third quarter, one was a trained nurse who had just returned from abroad. The case terminated fatally, and the cause of death was certified to have been "pyæmia, 16 days" with no reference to 'enteric fever.' This case I, therefore, eliminate. In three instances, the victims sickened too soon after arrival (viz : two weeks, 16 days, and same day,) to have acquired the disease in the town, and one other case was due to one of these three cases. The history of this last case seems so strange that it is worthy of record in some detail.

M.N. arrived in Eastbourne about the 4th of July, 1893. She was removed to the Sanatorium on the 28th of July, with an unmistakable attack of enteric fever, after having been ill some few days. On the 22nd of July W.B. (clerk at the hotel where M.N. was staying) swam from the Pier to Langney Point, where the sewer outfall is situated, a distance of three miles. On July 24th he had diarrhoea and sickness, and on August 18th he was removed to the Sanatorium with a severe attack of enteric fever to which he succumbed. At the hotel, he lived at a distant part of the building and did not use the same sanitary conveniences. Inasmuch as M.N. was on the 22nd July ill with enteric fever (as yet undiagnosed) I am inclined to the opinion that W.B. became infected on the occasion of his swim to the Point. The diarrhoea and sickness, if not the first manifestations of infection, would render him specially predisposed to receive the poison.

The remaining three cases recorded in the third quarter and the two cases of the fourth quarter could not be definitely traced to any cause. It may, however, be pointed out that from the 20th of July, or perhaps a few days earlier, until the 4th of September, and again from the 17th to the 22nd of September, the sewers were receiving the infected discharges from the patients ill of enteric fever. During those periods disinfection of the discharges would be omitted as the cases were undiagnosed. If the incubation period of enteric fever be taken to average a month, the cases reported during the second half of the year can be arranged in a *theoretical* succession. The case of W.B. already referred to will not however fit in. The cases in italics are the five cases which were just now stated to be inadequately explained.

INFECTED.				SICKENED.				ISOLATED.			
M.N.	?	...	...	20th July,	...	...	...	28th July.			
W.B.	?	...	...	28th July,	...	...	...	18th August.			
<i>R.C.</i>	<i>13th July,</i>	...	...	<i>13th August,</i>	...	...	...	<i>24th August.</i>			
<i>J.S.</i>	<i>4th August,</i>	...	...	<i>4th September,</i>	...	...	...	<i>14th September.</i>			
<i>W.M.</i>	<i>16th August,</i>	...	...	<i>16th September,</i>	...	...	...	<i>23rd September.</i>			
J.L.	?	...	...	18th August,	...	...	...	4th September.			
<i>M.G.</i>	<i>7th September,</i>	...	...	<i>7th October,</i>	...	...	...	<i>27th October.</i>			
<i>C.D.</i>	<i>8th October,</i>	...	...	<i>8th November,</i>	...	...	...	<i>18th November.</i>			

These theories can be diagrammatically expressed thus:—



If these suppositions could be received as more than theories, they would indicate that there were three distinct importations of the disease during the third and fourth quarters of the year, and that during these quarters no case originated within the Borough.

The possibility of the spread of infection by the sewers in this manner greatly emphasises the need of every house being adequately cut off from the sewers and the dangers which may exist from defective connections between closets, etc.

ERYSIPELAS.

Forty-one cases of this disease were reported during the past year, more than half of the cases (*viz.* 24) occurring in adults. In one instance only was there more than one case in a family, and in that instance the infection appears to have spread direct from the first to the second case.

Inquiries were made during 1893 to distinguish 'traumatic' from 'idiopathic' cases, *i.e.* between attacks following and those independent of wounds. The distinction between the two classes of cases, although a customary one, is admittedly an illdefined one, inasmuch as in any case of so-called idiopathic erysipelas, the wound or abrasion, which was the seat of infection, may be so insignificant as to be overlooked, and the case, therefore, really be one of 'traumatic' erysipelas. The results of the inquiries are rendered somewhat more inexact owing to the inquirers being without medical training. Making mental reservations for these errors, the results obtained from last year's enquiries are in themselves suggestive. In 21 cases the disease was reported to be idiopathic, in 7 only traumatic, and in 13 no distinction was made. Four patients were stated to be "subject to attacks."

The results obtained from the notification of erysipelas do not appear to me to be commensurate with the labour and expenditure involved in the notification of the disease. The object of notification is to assist the Sanitary Authority to detect the connection between disease and insanitary conditions, with a view to stamp out the disease by eliminating the conditions favourable to its spread. The causes usually assigned to idiopathic erysipelas are exposure to cold, wind, or sun without wound or infection. Such cases are, therefore, independent of insanitary conditions.

There is also this distinction between erysipelas and the other infectious disease which are usually styled 'exanthemata.' Whilst in erysipelas the infection can only pass from wound to wound, and the systemic disturbances are directly proportional to the severity of the local affection, in the exanthemata the severity of the systemic disturbances as a rule bears no relation to the amount of eruption (or rash), and there is no evidence that the infection can be received only in a damaged organ. Further, with most of the exanthemata, one attack protects the victim against the disease, but an attack of erysipelas appears to predispose the individual to repeated infection in after life.

Among medical practitioners, there is great diversity of opinion as to what degree of local redness, etc., constitutes an attack of erysipelas. Some class as erysipelas the swelling and redness which follows severe sunburn, which is usually unaccompanied by any systemic disturbance. Others would diagnose the disease as present only when the blush is well defined, showing a tendency to spread steadily over the part infected and associated with fever, etc.

With such a diversity of opinion as to what constitutes the disease; such uncertainty as to its origin and the greater uncertainty as to its connection with insanitary conditions, I am compelled to state that I cannot see any benefit derived from the notification of the disease at all commensurate with the expenditure of time and money which that notification involves. To notify this disease seems the more useless when it is considered that the graver diseases of septicæmia and pyæmia—two diseases which are almost invariably associated with traumatism under bad hygienic conditions—are not included in the schedule of the Act.

PUERPERAL FEVER.

Only one case of this disease was notified last year. The circumstances of notification were peculiar, and are illustrative of the unsatisfactory nature of the schedule of the Infectious Diseases (Notification) Act, 1889. Included in the Registrar's weekly return dated 23rd January, was a death certified as "*Child-birth, Placenta Prævia 16 days, Septicæmia 14 days,*" which I considered to have been a case of puerperal fever. I wrote to the gentlemen who certified the case, and pointed out that in my opinion the case ought to have been notified, and he forthwith sent me a notification. Some few days later I learned that although he had notified the case, he was of opinion that the diagnosis embodied in the death certificate was not equivalent to a diagnosis of puerperal fever. The whole question turns on the exact meaning of the term puerperal fever.

The name is a very old one and undoubtedly has been and is used in a very loose sense. In the present days a confinement should not be followed by fever, and the occurrence of fever is generally an indication of the inoculation with and absorption of septic matter. It is quite time that scientific medicine either rejected the term "puerperal fever" or gave a definition of the term suitable to present knowledge. In its loose use it would, in my opinion, include all febrile disturbances due to septic poisoning and also any febrile disease (not septic) which might occur during the puerperum such, as scarlet fever, etc. As used in the Notification Act, I venture to think it should include all febrile states due to septic causes—not others—and that the case mentioned would, therefore, come within scope of the Act. It is the septic infection of lying-in women that the Act is designed to prevent.

DEATHS.

During the year 576 deaths were registered within the Borough, viz., 281 males and 295 females. The uncorrected death-rate was 14·76 per 1,000 persons. Included in the total of 576 are the deaths of 78 persons who had not resided within the Borough for six months at the date of death. Such deaths are used for correction for non-residents, in preference to the deaths in public institutions, inasmuch as the majority of those who died in the public institutions were residents. Deducting the 78 'visitors,' the corrected total becomes 498 and the corrected death-rate, 12·76 per 1,000.

The uncorrected death-rate for 1893 was 1·18 above the rate for 1892 and 0·83 above the average rate for the decennium 1883-1892.

DEATH-RATES OF THE SEXES.

The death-rate among males was 17·17, and among females 13·02 per 1,000 of the estimated numbers of each sex. The ratio of males to females in the estimated population of 1893 was 75 : 100 ; the ratio of male deaths to female, 90 : 100. By distributing the deaths among the sex-age-groups, I find that the mortality among males last year was in excess of that among females in each of the age-groups except that of 5-15 years. In the age-groups 0-1 and 1-5, the male mortality was respectively 30 and 60 per cent. in excess of that of females.

TABLE XI.
RATIOS OF MALES TO FEMALES.
Females = 100.

Age Groups.	Population.	Deaths.
Under 1 year	88	128
1- 5 years	95	159
5-15 „	104	41
15-65 „	62	85
65 and upwards	69	69

DISTRICT DEATH-RATES.

The deaths occurred in the three ‘sanitary districts’ of the Borough as follows:—West District, 232 deaths, Central, 113, East, 230. The death-rates (uncorrected) were West 15·82, Central 9·54, East 17·01 per 1,000 of estimated populations. The West District contains five public institutions in which 88 deaths occurred, the East Ward two institutions where three deaths took place. The Central District contains no public institutions. The deaths in these institutions ought to be distributed over the whole Borough, according to positions of deceaseds’ homes, but the necessary information is not available.

The uncorrected district death-rates of 1893 were above the rates of 1892 in the West and East Districts and below in the Central, viz. : West District, 1892, 14·77 ; 1893, 16·82 : East District, 1892, 17·01 ;

1893, 13·35: Central District, 1892, 11·28; 1893, 9·64. A glance at Table 5 in the Appendix will show the comparative immunity from infectious disease enjoyed by the Central District. In the absence of all information as to age constitution of the populations of the districts, it is impossible to give a reason for such immunity.

AGE GROUP DEATH-RATES.

The past year affords an illustration of the utility of age-group death-rates. These, as I explained in last year's report, are the death-rates obtained by calculating the mortalities prevailing among the individuals included in the selected age-groups.

TABLE XII.

Age Groups.	No. of persons in Age Group		Deaths Registered 1893.	Uncorrected Death-rate per 1,000 in each group.	
	Enumerated census, 1891.	Estimated middle of 1893.		1893.	1892.
Under 1 year	731	815	130	159·50	196·90
1-5 years	2,776	3,098	101	32·60	9·50
Under 5 years	3,507	3,913	231	59·03	48·60
5-15 years	7,412	8,271	34	2·15	2·15
15-25 years	8,009	8,938	22	3·99	3·99
25-65 years	14,557	16,243	158	9·56	9·56
65 years and upwards.	1,484	1,655	131	79·31	79·31
All ages..	34,969	39,020	576	13·58	13·58

To say simply that the total death-rate of 1893 was in excess of that of 1892 conveys but little information. The questions for consideration are—Was the excess preventible or not? Is it probable that the excess was peculiar to the year or was it part of an upward tendency in the death-rate of the Borough? On referring to Table XII, which gives the age-groups rates for 1892 and 1893 it will be observed that the increase was limited to the years comprised in the age-groups 1-5 and 5-15. The death-rate for the ages 1-5 years was in 1893 rather more than 250 per cent. greater than in 1892, and the rate for the years 5-15

rather more than 100 per cent. greater. On referring to Table 5 in the Appendix it will be found that 57·7 per cent. of the deaths at these ages were due to zymotic diseases. These two facts sufficiently indicate that a very large proportion of the increase was due to causes which are usually described as preventible, that the increase in the total rate was due to zymotic disease, and, therefore, presumably temporary only and not part of a permanent, upward tendency on the part of the death-rate.

INFANTILE MORTALITY.

The deaths of infants under one year of age numbered 130, the mortality per 1,000 births being 144,* 22 below the rate for 1892 and 22 above the average annual mortality during the decennium 1883-92. The mortality during 1893 has been exceeded once only since 1883, viz., in 1892, when it was 166 per 1,000. As regards sex distribution, the 130 deaths comprised 73 boys and 57 girls. As the births registered were 478 males and 419 females, the mortalities among boys and girls were respectively 152 and 135 per 1,000 births. 68 of the deaths occurred in the East District, 22 in the Central, and 40 in the West (including 10 in Public Institutions).

Of children aged from 0 to 5 years, 231 deaths were registered, viz., 135 males and 96 females. The corrected annual average for the decennium 1883-92 is 196, 35 less than last year's total. The mortality among children under 5 years of age was 59·03 per 1,000, 10·03 above the mortality of 1892. The mortality among the boys was 71·26, and that among the girls 47·54. Of the 231 deaths, 128 were registered from the East District, 34 from the Central, and 59 from the West (including 18 in Public Institutions).

With the intention of inquiring into the relatively high mortality of children in this Borough, I have prepared a series of Tables analysing the deaths as to sex, age, cause, &c. Tables XIII. and XIV. are from the series which goes back to 1881. On the present occasion want of space prevents my dealing with the subject in further detail.

* The rate per 1,000 births is the mortality usually adopted. If calculated on the *estimated population* under 1 year of age at middle of 1893, the mortality was 159·50, and if on the *survivors under one year of age* at middle of 1893, 174·96 per 1,000.

TABLE XIII.

CAUSES OF ALL DEATHS REGISTERED AT AGES UNDER 5 YEARS.	Under 1 Day.	Days.							Weeks.			Months.												Years.				Total.	Wards.		
		1	2	3	4	5	6	1	2	3	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	E	C		W		
Diphtheria		
Measles		
Scarlet Fever		
Whooping Cough		
Diarrhoea		
Rickets		
Tubercular Diseases		
Premature Births		
Malformations		
Convulsions...		
Lung Diseases		
Teething		
Violence		
Debility		
Not Certified		
All other causes		

Females.	Under 1 Day.	Days.							Weeks.			Months.												Years.				Total.	Wards.		
		1	2	3	4	5	6	1	2	3	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	E	C		W		
Diphtheria		
Measles		
Scarlet Fever		
Whooping Cough		
Diarrhoea		
Rickets		
Tubercular Diseases		
Premature Births		
Malformations		
Convulsions...		
Lung Diseases		
Teething		
Violence		
Debility		
Not Certified		
All other causes		

TABLE XIV.

	Males.			Females.			Total.		
	East	C'ntral	West	East	C'ntral	West	East	C'ntral	West
Under 1 Day	3	—	3	2	—	2	5	—	5
1 Day and under 1 Week.	6	—	1	1	1	—	7	1	1
1 Week and under 1 Month	5	1	2	3	—	—	8	1	2
1 Month and under 1 Year	23	13	16	25	7	16	48	20	32
1-5 Years	39	6	17	21	6	12	60	12	29
	76	20	39	52	14	30	128	34	69

SENILE MORTALITY.

131 deaths were registered at ages of 65 years and upwards, viz., 53 males and 78 females. These deaths constituted over 22 per cent. of all the deaths registered. Although the total for 1893 (131) is higher than the corrected decennial average (124), yet such increase is to a certain degree satisfactory, it probably being due in part to a larger proportion of individuals surviving to old age, and in part to increased immigration of retired individuals from busier parts of the country. To decide which of these conditions absolutely prevails would entail a large amount of calculation for which time has not been available. 13 deaths were registered at ages of 85 and upwards, viz., 5 males and 8 females. The maximum age at death of any individual was 95 years for males, and 91 for females.

ILLEGITIMATE MORTALITY.

The deaths of 27 illegitimate children were recorded during the year, a number equal to 4.6 per cent. of all deaths. 20 of the children were infants under one year of age, and the mortality of illegitimate infants amounted to 500 per 1000 births, as compared with a similar rate of 144 among legitimate children.

The assigned causes of death were: *Measles* 3, *Whooping Cough* 2, *Diarrhœa* 4, and *Congenital Syphilis* 1; *Tubercular Meningitis* 1; *Developmental Diseases* 1; *Convulsions* 2, *Heart Diseases* 1, *Respiratory Diseases* 5; *Accidents at Birth* 1; *Ill-defined causes* 5; *Not certified* 1.

Inquests were held in four instances.

CAUSES OF DEATH.

ZYMOTIC DISEASES.

158 deaths were due to diseases of the Zymotic class, 27 per cent. of all deaths. In 1892, 95 deaths were due to the diseases included in this class, showing an increase in 1893 of 63 over the total for 1892, equal to nearly 66 per cent. Practically the whole of the excessive mortality due to Zymotic disease arose from outbursts of certain of the diseases included in the sub-group "Miasmatic diseases." The deaths from miasmatic diseases in 1893 were nearly double the corrected decennial average, 113 as compared with 60.

The zymotic death-rate is calculated on the deaths from the "seven principal zymotic diseases," viz., small-pox, measles, scarlet fever, diphtheria, whooping-cough, 'fever' (which includes typhus, enteric, and simple continued fevers), and diarrhœa. The deaths from these causes numbered 140, equivalent to a zymotic death-rate of 3.58 per 1,000, as against 1.37 in 1892. Table 6 in the Appendix gives full particulars as to the numbers of deaths from these causes since 1883, together with the corrected averages for the decennium.

Small-pox.—Although there were cases of this disease in the immediate neighbourhood, no case occurred within the Borough. One girl (a servant) who arrived in Eastbourne ailing, and was on that account sent home again, proved to be ill with small-pox, and was removed to hospital two days after leaving this town. The house where she stayed whilst here was thoroughly disinfected, and all the other inhabitants of the house were vaccinated or re-vaccinated.

Measles.—No fewer than 55 deaths were due to this disease. The victims included 29 boys and 25 girls, of whom 27 boys and 21 girls were under five years of age. 41 of the deaths were registered from the East District, 5 from the Central, and 9 from the West.

No records exist of any previous outbreak of this disease of anything like the magnitude of the epidemic of 1893. The highest number of deaths caused by this disease in any year prior to 1893, was 12 (1885) and the next 10 (1889). In considering the past returns, the figures *appear* to indicate a double periodicity. Outbreaks have occurred at 4 year intervals and smaller outbursts at intermediate four year periods. Thus, going back to 1881, the records show markedly increased mortalities, which may be called

“first degree,” in 1885, 1889, and 1893. There were smaller, but still large mortalities, “second degree,” in 1883 and 1887. In 1891 when a similar outbreak was due, there were no cases, but during 1889 and 1890 there had been an epidemic of diphtheria.

The first cases in 1893 of this disease were reported among the militia recruits, the information being sent to me by the Medical Officer in charge at the Ordnance Station on the 22nd of March. I had an interview with him and found that the men were drawn from the surrounding districts and had just been called up. I asked for, and obtained a list of the men who were ‘up’ but not quartered in the station. No case of measles was found among their families. On the 18th of April a child of a N.C.O. was reported ill with the disease. All the above cases were under medical care and properly isolated.

On the 26th of April information was received that about one-half of the infants at Christ Church Schools were away. The Schools were forthwith visited, lists of the absentees obtained, and a house to house inspection at once commenced. The school registers showed that in the infants’ school out of 228 children on the register, 116, 104 and 155 were absent on the 26th and 27th April and 1st May. In the boys’ and girls’ schools of 441 scholars, 150, 112 and 169 were away on each of the dates given.

The District Inspector visited the families of those absent on the 27th, with the following results:—Infant School: Absentees, 104, from 47 families; 28 of these families were infected. Mixed School: Absentees, 112, from 58 families; 24 infected. Inquiries were also made at the Norway and All Souls’ Schools, and at a small school known as ‘Miss Brodie’s.’ The last was the only one of the three affected.

These facts were placed before the Council at their meeting on 1st May and the closure of Christ Church Schools recommended. The schools were ordered to close for four weeks from that day. Miss Brodie’s school closed voluntarily at my suggestion. The school premises were disinfected and thoroughly cleansed and periodical inquiries made among the scholars. The closure was ultimately extended for a further period of three weeks.

The histories of the other schools were very similar and it will suffice to give the dates of closure in each instance.

Christ Church Schools, closed	1st May	for 4 weeks, extended to 7.
Norway Schools	„ 10th May	„ 4½ „ „ 5½.
All Souls' Schools	„ 5th June	„ 4 weeks.
Holy Trinity Schools	„ 5th June	„ 4 „
Wesleyan School	„ 5th June	„ 4 „
St. Mary's Schools	„ 17th July	„ 2 „ (to holidays).

St. Saviour's, Compton Place, and Mead's Schools were not affected, and the attendances were throughout up to the average. Periodical inquiries were made among the absentees from these schools to detect earliest invasion of the disease, but only solitary cases were reported.

About the 3rd of May circular letters were addressed to the head masters of schools still open warning them to exclude children from the closed schools, and their own scholars coming from infected families, and immediate notice was asked for of all cases of measles that came to their knowledge. Circular letters were also forwarded to the medical practitioners asking for early information of any cases that came under their care, pointing out the need of urging careful isolation of infected families—not merely the sick—and offering disinfection of rooms, etc. Much valuable assistance was received both from the school teachers and the medical practitioners. No trustworthy information, however, exists as to the actual number of cases which occurred, but by assuming a case mortality of 3·0 per cent. as a basis of calculation, there were probably from 1,800 to 2,000 cases during the months March to September. The majority of these cases were I should think without medical attendance.

The course taken by the epidemic appeared to be from the Ordnance Station to the East end of the Borough and then to the North-east. The disease, keeping along the outer fringe of the town, spread up to Old Town and Ocklynge, and finally disappeared. As far as the available information goes, the central parts of the Borough, and more especially the sea front, remained free from the disease.

In the course of the epidemic a suggestion was made that the disease should be included in the schedule of the Notification Act. The advantages to be gained by notification are somewhat doubtful. Notification without isolation would probably do little good, and the isolation of *cases* of the disease would hardly suffice, isolation of the infected *families* being really required. It is generally accepted that the disease is infectious as soon as the earliest symptoms, the coryza, etc., set in. Usually these symptoms are

thought to be due to a 'cold,' and so the mischief is done before the case is diagnosed. It is also to be remembered that a very large number of patients are never under the care of a medical practitioner, which would render notification very difficult, if not almost impracticable. Inasmuch as the slightest coryza will spread the infection, it would be necessary to quarantine all who may have been exposed to infection for three or four weeks (the time required for incubation) to effect any real check on the spread of the disease.

Notwithstanding these serious difficulties, and the great expenditure involved, the disease has been scheduled in certain towns, notably Edinburgh, where the disease has been notified for upwards of 15 years. A pamphlet, "Ten Years of Notification in Edinburgh," published some few years back by Dr. Harvey Littlejohn, now Medical Officer of Health for Sheffield, gave certain statistics relating to the disease. In the ten years 1880-89, 30,000 cases were notified (fees £3,500), and the cases during the second five years were 2,600 in excess of those of the first five. During 1880-85, there were 14,418 notifications and 520 deaths; during 1886-91, 22,032 notifications and 730 deaths. So that except for a reduction in the mortality from 3·8 per cent. of notifications in 1880-85 to 3·7 per cent. in 1880-91, there appears to have been no beneficial results. It will be noted that these mortalities are calculated on the notifications, *i.e.*, known cases, which may have formed (and most probably did form) only a portion of the total number of cases.

In the face of these facts it seems useless to adopt notification of measles, though the waste of life from this cause must be deplored. Much of that waste could be obviated did the victims receive more intelligent treatment from their parents.

SCARLET FEVER.—There were 7 deaths from this disease, more than five over the corrected decennial average (1·27). This disease has been fully dealt with above (*vide* page 18, *et seq*).

WHOOPIING COUGH.—29 deaths were caused by this disease, nearly three times the corrected decennial average (10·16). 13 of the deaths were at ages under 1 year, and 14 between 1 and 5 years. Deaths from this disease appeared for the first time, during 1893, in the returns for the fifth week of the year, and continued to appear until the 14th week; in other words, the disease was prevalent during three months from the middle of January to the middle of April. The years 1882, 1886, 1888, 1891 and 1893 were all years with an excessive mortality from this cause. It will be noticed that the interval has been approximately four years in each case.

This disease will always be endemic as long as children ill with the disease are (as is commonly done) allowed to mix with others. Most of the lives lost from this cause, except in very young children, are simply wasted, as with proper care and attention the mortality can be kept within very narrow limits.

ENTERIC FEVER.—The Borough was again very free from this disease during 1893. The deaths registered numbered 3, of which one was probably an erroneous diagnosis. The corrected decennial average is 3·42.

SEPTIC DISEASES.—The deaths from puerperal fever, septicæmia, &c., were below the averages.

DIARRHŒA.—39 deaths were attributed to this cause, nearly 10 above the corrected decennial average. Except 1886, when the number of deaths amounted to the same total, last year's return was the highest since 1881.

Diarrhœa being really only a symptom of disease, and not a disease *per se*, the use of the term introduces considerable uncertainty into the classification, but the practice of certifying deaths as caused by diarrhœa is so common that it seems almost impossible to get the cause substituted for the effect. The deaths certified under this heading naturally fall into two groups (*a*) those of old people, such cases being spread over the whole year, and (*b*) those of infants up to about two years of age, these cases being confined almost exclusively to the summer months. Of old people, 5 deaths were certified as due to diarrhœa, the cases occurring in January, July, August (2), and September. Of infants, 34 deaths were due to diarrhœa.

The summer diarrhœa of infants (*cholera infantum*) is generally recognised to be due to a combination of the effects of heat, rainfall, and insanitary conditions, a foul soil being thought by many to be the most important factor. My inquiries, however, as to the circumstances accompanying these deaths indicate that "the bottle" plays as important a part in causing death as any of the factors just mentioned. During 1893, 28 cases of infantile diarrhœa were inquired into, in all instances (even to the youngest infant) the bottle was the means of feeding, whilst insanitary conditions were by no means constant—a large proportion of the houses being reported as in good sanitary condition and clean (see also p. 28 of Report for 1892).

The 34 cases of infantile diarrhœa in 1893 occurred between the 3rd of May and the 19th of October. The appended table gives the number of cases occurring in each month and the chief meteorological factors :—

TABLE XV.

Month of	No. of Deaths from Infantile Diarrhœa.	Temperature.		Sunshine.		Rainfall.	
		Mean T. for Month, 1893.	Difference from 5 year's Average.	Hours recorded 1893	Difference from 5 year's Average.	Total fall 1893.	Difference from 5 year's Average.
May	1	55·6	*3·0	217·6	†15·6	0·78	†0·70
June	1	59·4	*2·0	263·4	*59·7	0·46	†1·49
July	13	62·3	*3·3	204·2	*10·1	4·96	*1·48
August	10	64·4	*3·7	247·4	*67·0	0·98	†2·76
September	6	58·6	*0·0	144·7	†30·7	4·86	*3·38
October	3	53·8	*3·8	125·6	†0·8	5·48	*0·50

NOTE.—* Indicates excess, and † defect.

Table XIII. (*vide supra*) contains full information as to age and sex incidence, and to district distribution. From the 13 cases recorded from the West District 2 must be deducted, having occurred in the Union Workhouse. The deaths of 4 illegitimate children and of 3 visitors were due to this complaint.

Although I have stated just above that the feeding bottle appears to be an important cause of death from diarrhœa, yet Table XV indicates that the effect of heat, &c., are by no means to be ignored. During the six months May to October, the mean temperature exceeded the quinquennial average for these months by 2·4 degrees ; the total amount of bright sunshine recorded was 89·7 hours above the quinquennial average ; and the total rainfall for the period was 0·41 inches above the average. In July 13 cases were registered, but none of the variations from the quinquennial averages were maximal. The effect of the rain is obscure. It may, by moistening the polluted dust and soil, cause an increase in the amount of virus producing the

diarrhœa, or it may (especially if in heavy showers) cleanse everything and stop the affection, and although there appears to be *primâ facie* evidence of this in Table XV., yet to base any argument on the figures of one year and one locality is too untrustworthy to be worth looking into.

EPIDEMIC INFLUENZA.—This disease appears to be practically endemic not epidemic. 11 deaths were due to it in 1893, compared with 9, 14, and 40 in 1890, 1891, and 1892.

CONSTITUTIONAL DISEASES.

Among the constitutional diseases as causes of death, "Cancer" and "Tubercular Diseases" are the only two to which I desire to refer in detail.

As a class, the "constitutional diseases" were the assigned causes of death in 97 instances—compared with a corrected decennial average of 119. By referring to Table 2 in the Appendix, it will be noticed that reductions have occurred in each of the four divisions of this class used in that Table.

CANCER.—In the report for 1892, reference was made to the discussion as to increase of this disease (or diseases included under this name) in recent days. Desiring to ascertain the change in prevalence of this cause of death, I have taken out and tabulated the deaths of each quarter and year from 1883 to 1893, and have calculated the mortalities due to it, as rates per 1,000 (all ages) of estimated population.

It will be as well to state that the deaths included in these calculations were deaths certified as "malignant tumour," "cancer," "sarcoma," "epithelioma," &c., and that the term "malignant disease" is a more accurate description of the cause of death than "cancer," unless the latter be used in its popular sense, which would be out of place in a report such as this. It is to be noted too, that the mortalities have been calculated on the population at all ages. After the table had been constructed it was recognised that the proper basis would be the estimated number of persons at the predisposing ages, viz., late adult life, and old age. Time has, however, failed for making the necessary fresh calculations. The table is not included in this report, but reserved for publication (after amendment) elsewhere.

Setting aside these defects in the present results, it appears that the decennial average mortality in each of the four quarters and in the whole year has been 0·61, 0·49, 0·75, 0·62, and 0·69 per 1,000 persons at all ages. The quarterly and annual rates (on the same basis) for 1893 were 0·83, 0·51, 0·50, 0·71, and 0·64. These figures indicate an apparent increase in each quarter except the third, the decrease of that quarter (50 per cent.) being sufficient to cause a decrease in the rate for the whole year. I venture to think that the apparent increase is a real one because the increase in accuracy of death certificates reduces the probability of an error of excess in an indefinite class such as "malignant disease." A more minute examination of the prevalence of this cause of death in Eastbourne and in England and Wales is well worth the labour required.

PHTHISIS.—The deaths from this disease numbered 39, being 10 below the corrected decennial average. A marked decline in the mortality from phthisis (and other tubercular diseases) was the earliest benefit derived from sanitary work on a large scale. It has, however, been alleged that that decline has passed away and that the disease is again on the increase. I have taken out the figures for this disease (also for "other tubercular diseases" and for "respiratory diseases") but propose to postpone their consideration until I deal with the deaths from diseases of the respiratory system.

OTHER TUBERCULAR DISEASES were the cause of 16 deaths, 15 less than the corrected decennial average.

DEVELOPMENTAL DISEASES.

PREMATURE BIRTH was certified as the cause of death in 15 cases, 10 less than the corrected decennial average, and OLD AGE in 21 cases, one more than the average. Both these terms are too indefinite to be worthy of much consideration.

LOCAL DISEASES.

DISEASES OF THE NERVOUS SYSTEM.—APOPLEXY caused 25 deaths, the exact decennial average number, and OTHER NERVOUS DISEASES 23 deaths, one less than the decennial average.

DISEASES OF THE CIRCULATORY SYSTEM.—42 deaths were assigned to diseases of the heart or blood-vessels, one less than the decennial average.

DISEASES OF THE RESPIRATORY SYSTEM.—92 deaths were caused by diseases of this class, 5 above the decennial average. Of all local diseases, those of the respiratory organs appear to be the most preventible, and this group is, therefore, worthy of some analysis. The deaths registered in the four quarters of the year numbered 30, 31, 6, and 25. The cases included 44 of bronchitis and broncho-pneumonia and 42 of pneumonia and pleuro-pneumonia; 31 of the victims to these diseases were children under the age of 5 years, and 25 persons aged from 5 to 55 years (*vide* Table 5 in Appendix).

Dampness of soil or of house, neglect (in the young), and want of good ventilation are the chief factors causing the mortality from these diseases. It was owing to the drying of the subsoil (and thereby of the house) that the decline in tubercular and pulmonary affections already referred to, was brought about.

By taking out the quarterly and annual mortalities as already described above in the paragraph "Cancer," averages have been obtained for the tubercular and pulmonary diseases—*vide* table :—

TABLE XVI.

RATES PER 1,000 OF POPULATION.

		Quarters.				Year.
		1	2	3	4	
Phthisis ...	Average ...	1·33	1·19	1·21	1·32	1·30
	1893 ...	0·63	0·82	1·32	1·22	0·99
Other Tubercular Diseases ...	Average ...	0·70	0·89	0·85	0·78	0·80
	1893 ...	0·32	0·71	0·30	0·30	0·41
Diseases of Respiratory Organs	Average ...	3·32	2·22	1·14	2·30	2·24
	1893 ...	3·11	3·18	0·61	2·54	2·36
Totals from these causes ...	Average ...	5·35	4·30	3·20	4·40	4·34
	1893 ...	4·06	4·71	2·23	4·06	3·76

The averages are those for the decennium 1883—1892.

Extremes of cold and wet would affect the mortality from these diseases in any given year, but when dealing with a sufficient number of years averaging would eliminate the disturbances due to these causes, and it is therefore probable that the larger table from which Table XVI is abstracted, represents the normal mortality from these diseases. "Curves" would, however, demonstrate more satisfactorily the real changes that have taken place. During 1893 it is almost certain that some increase in the mortality of these diseases was caused by the prevalence of measles, whooping cough, and epidemic influenza. I venture therefore to think that on the whole there has been a diminution of mortality from these causes, and that the diminution is still going on.

INQUESTS.

The following statement sets forth the cases in which inquests were held :—

Sex.	Age.	" Finding."	Post Mortem Examination.
F.	3 years.	Natural causes : Congenital heart disease	Made.
F.	3 years.	Compression of brain from effusion of blood through accidental fall from a chair ...	Made.
F.	4 months.	Natural causes : convulsions ...	Made.
M.	6 months.	Natural causes : inflammation of lungs ...	Made.
F.	33 years.	Drowning : no means to show how she got into the water ...	Made.
M.	72 years.	Natural causes : syncope from heart disease	Made.
F.	9 months.	Pericarditis : syncope : natural causes ...	Made.
M.	60 years.	Natural causes : failure of heart's action from over-exertion : valvular disease of heart ...	Made.
M.	1 year.	Natural causes : syncope from pleurisy ...	Made.
M.	69 years.	Suicide : hanging : unsound mind...	
F.	55 years.	Suicide by poison (cyanide of potassium) : unsound mind ...	Made.
M.	About 30 yrs.	Found drowned ...	Made.
F.	6 years.	Shock to system from burn : accident ...	
F.	7 years.	Fracture of skull : run over : accident ...	
M.	56 years.	Suicide : bullet wound from revolver : shot in the head ...	

F.	48 years.	Suicide : jumped out of window : injury to spinal cord from fracture of vertebræ	Made.
F.	41 years.	Fracture of skull : suicide whilst of unsound mind : fall from window	... ..
F.	69 years.	Fatty heart : senile gangrene : erysipelas	
M.	62 years.	Fracture of skull : accident : thrown from horse	... ..
F.	12 years.	Natural causes : rupture of blood vessel on brain during fit from pericarditis	...
F.	7 days.	Acute iritis and meningitis : convulsions...	
M.	About 35 yrs.	Apparently drowned : found dead at sea	...
M.	69 years.	Fracture of skull : injury to brain : accidental fall...	... ..
M.	5 years.	Shock from burns : accidental	... ..
M.	59 years.	Natural causes : apoplexy	... ..
M.	Newly born.	Hæmorrhage from non-tying of umbilical cord : misadventure	... ..
F.	50 years.	Natural causes : syncope from valvular heart disease	... ..
M.	21 days.	Natural causes : exhaustion from ulceration of the navel	... ..
M.	50 years.	Suicide : drowning	... ..

It is a matter of regret that post mortem examinations are not made oftener than is customary. The evidence afforded from an external examination and from lay-witnesses cannot be considered satisfactory.

UNCERTIFIED DEATHS.

In 7 instances, no medical certificates of the cause of death were received and no inquests held. Such cases are returned as "uncertified" although the cause of death may be practically known. The cases were as follows :—

Male, 1 month	... probable cause of death ...	Convulsions.
Male, a few minutes	... probable cause of death ...	No cause given.
Female, 3 months	... probable cause of death ...	Convulsions.
Male, 10 months	... probable cause of death ...	Convulsions due to teething.

Female, 6 months ... probable cause of death ... Convulsions.
 Female, 34 years ... probable cause of death ... Hæmorrhage after
 child-birth.
 Male, 69 years ... probable cause of death ... Heart failure.

Uncertified deaths are useless for statistical purposes, and the above cases have been ignored in dealing with the various causes of death. Reference to the social aspects of uncertified deaths was made in the Report of the Select Committee on Death Certification.

DEATHS OF VISITORS.

The following particulars as to deaths among visitors are included to enable the necessary corrections to be made, by any one, to Table 5 in the Appendix :—

Males	39	<div style="display: inline-block; vertical-align: middle; font-size: 4em; line-height: 1;">{</div> <div style="display: inline-block; vertical-align: middle;"> Under 1 year ... 4 1-5 years ... 3 5-15 years ... 4 15-25 years ... 4 25-65 years ... 38 65 and over ... 25 Total ... 78 </div>
Females ...	...	...	39
			—	
Total ...	...	...	78
			—	
			—	

CAUSES OF DEATH:—				Age group of death thus ()
Diphtheria ...	...	...	...	2, (5-15).
Measles ...	...	...	...	1, (5-15).
Scarlet Fever ...	...	...	...	2, (1-5, 1), (15-25, 1).
Influenza ...	...	...	...	2, (65-75, 1), (75-85, 1).
Diarrhœa ...	...	...	...	4, (0-1, 2), (1-5, 1), (65-75, 1).
Septicæmia ...	...	...	...	1, (15-25).
Cancer ...	...	...	...	6, (25-35, 1), (35-45, 1), (45-55, 3), (55-65, 1).
Hydrocephalus ...	...	...	...	1, (25-35).
Phthisis ...	...	...	...	8, (25-35, 5), (35-45, 1), (45-55, 1), (65-75, 1).
Diabetes Mellitus ...	...	...	...	2, (65-75).
Old Age ...	...	...	...	5, (65-75, 1), (75-85, 1), (85 and over, 3).

Inflammation of Brain & Membranes	1, (0-1).
Apoplexy	3, (35-45, 1), (45-55, 1), (55-65, 1).
Senile Dementia	2, (25-35, 1), (55-65, 1).
Epilepsy	1, (0-1).
Other Diseases of Nervous System	1, (65-75).
Other Diseases of Heart	6, (55-65, 1), (65-75, 3), (75-85, 2).
Other Diseases of Blood-Vessels ...	1, (75-85).
Bronchitis	3, (15-25, 1), (45-55, 1), (65-75, 1).
Pneumonia	6, (25-35, 1), (35-45, 1), (45-55, 2), (55-65, 2).
Diseases of Stomach	2, (1-5, 1), (35-45, 1).
Enteritis	2, (55-65).
Obstructive Diseases of Intestine ...	2, (5-15, 1), (65-75, 1).
Peritonitis	2, (15-25).
Liver Diseases	2, (45-55, 1), (65-75, 1).
Other Digestive Diseases	2, (25-35, 1), (75-85, 1).
Chronic Nephritis	2, (45-55, 1), (65-75, 1).
Prostatic Enlargement	1, (75-85).
Accident	2, (35-45, 1), (65-75, 1).
Suicide	3, (25-35, 1), (35-45, 1), (45-55, 1).

METEOROLOGY.

Table XI. and XIa. in the Appendix give in brief the most important meteorological records for 1893 and the averages for the previous quinquennium. These tables are included because for the elucidation of the connection between health and meteorology, a consideration of variations from averages is more instructive than a simple record of a year's observations. The Report of the Borough Meteorologist does not contain the data necessary for such consideration.

The year 1893 will be remembered for the long drought of the spring and early summer associated with an exceptional amount of sunshine, and followed by rain-storms of almost tropical severity. Inasmuch as the direct rays of the sun combined with dryness of atmosphere, &c., have been experimentally proved to be markedly inimical to "germ-life," the occurrence of so much zymotic disease in 1893 affords matter for consideration. Comparing the records of last year with those of the previous quinquennium, the following variations from the averages will be noticed:—

BAROMETRIC PRESSURE.—The mean reading of the barometer for 1893 (30·012 inches) was above the average (29·999 inches), March, April, July, September, and December being the months of excess. In February a reading of 28·796 inches was observed, but that minimum has been exceeded twice since 1888. The February minimum was not associated with any storm of exceptional violence, at least not in Eastbourne.

TEMPERATURE.—The mean temperature of the air, deduced from the means of the daily maxima and minima, was 2·10° above the average. The mean temperature for September was equal to the average, those for January, March and November below. The maximum temperature (80·60°) observed in August was the highest recorded since 1888. The year's minimum (21·40° in January) has been surpassed on three occasions. The mean daily range of temperature during 1893 shows greater variations than that of the quinquennium, but such is a common observation—the effect of averaging being to mask such variations.

RAINFALL.—From January to the beginning of March, and in September and October, the rainfall was much in excess of the average, yet owing to the drought from March to July, the total fall for the year was 1·21 inches below the average. The rain-storm of the 16th of July was of unprecedented severity, 2·5 inches and more being collected in six hours at two stations in the Borough. It is possible that a waterspout burst over the town, although none were seen that day. During September and October there were several very heavy storms, but none equal to the July storm.

SUNSHINE.—The total amount of bright sunshine recorded was 123·1 hours in excess of the record for 1892, and 289·8 hours in excess of the average annual amount for 1888—1892.

WINDS.—There was scarcely any cold East wind during the early spring, but North-East and East winds prevailed much later than usual and were doubtless the cause (in part) of the brilliant weather. The mean hourly velocity was 1·4 miles below the average, yet the number of observations of “calm” was 11 below the average. In November the mean hourly velocity was 3·8 miles above the average.

HUMIDITY.—The percentage of humidity for the year was 2·6 below the quinquennial mean. February and December were the only months in which the mean humidity rose above the average, and in April it was 8·7 *below*.

In order to trace, with any hope of success, the connection between climate and sickness (or mortality) it would be necessary to construct a series of “curves” of rates and meteorological data. This I have done to a very small amount, quite insufficient to be of present use, and I can only point out that the weather of 1893 was such that on *a priori* grounds, one would have expected to have been unusually free from zymotic sickness

(except infantile diarrhœa). The great heat would be unfavourable to the two extremes of life, but inasmuch as children could practically live in the open from March until Autumn, they were theoretically under the most favourable hygienic conditions possible.

SANITARY WORK.

Circumstances prevent me from giving a detailed account of the routine work of the Sanitary Department. The preceding pages contain the best records of the year's work, and in the following paragraphs only matters of special importance will be touched.

SLAUGHTER-HOUSES.—The condition of the existing slaughter-houses and the needs of improvement and registration were brought to the notice of the Sanitary Committee in November, 1892. The Committee concluded that an abattoir ought to be erected, and on reporting to the Council were authorised to make preliminary inquiries and bring up a scheme. A Sub-Committee was appointed to take the work in hand. The members of the Sub-Committee visited several towns having abattoirs, and by circular-letters collected information from all parts of the country. The results of the visits and of the circular-letters were identical and may be summed up as follows:—The butchers at first violent opponents to the erection of an abattoir, became afterwards its chief supporters; judiciously managed an abattoir not only covered its working expenses but occasionally returned a good profit; and the Medical Officers of Health, although unable to put forward direct statistical evidence, were of opinion that the clearing away of slaughter-houses from the midst of dwelling-houses had beneficially affected the health of the inhabitants of the districts.

During the past year many meetings have been held and several schemes submitted, but at the close of the year practically no advance had been made. In the meantime considerable improvements had been effected at the existing houses.

There are certain important considerations which cannot be too often insisted on. In the first place if no abattoir be erected now, a few years hence when abattoirs become compulsory the compensation to be paid for closing private slaughter-houses will be much heavier than it would be now, in consequence of the enhanced value of the existing houses brought about by registration, and the amendments made to secure registration. Again, with the continued growth of the town more slaughter-houses will be required, and

new private houses will be erected if no abattoir exist, which will entail still more expense for compensation. Lastly, it is of the utmost importance that all meat should be efficiently inspected, which can only be done when *all parts of the animal are examined*. To do this the inspector must be present during the 'dressing,' and he cannot arrive at a safe conclusion if he see only the dressed carcase. The Jews afford a notable example of the value of proper inspection made before the beast is dressed. Among the strict Jews, tubercular diseases (*e.g.*, consumption) are almost unknown, although many of them do not live in circumstances that favour such exemption, but rather to the contrary. It is a matter of common knowledge that the rejected carcasses are good enough for the Christian market, and that they are sent there.

DAIRIES AND MILKSHOPS.—These have been periodically inspected with special attention this last year owing to the prevalence of infectious disease. It is worthy of record that no case has been traced, or suspected to have been due, to the milk supply. A series of Regulations have been drafted and now await confirmation by the Council.

SEWERS.—During the hot dry weather many complaints were received of smells from road ventilators. It is probable that the drought favoured more deposit than usual, which flushing by cart and hose was unable to completely remedy. In certain instances the smells have been alleged to arise from closed ventilators, and in others the smells have been remedied by opening ventilators that had been previously closed.

Attention has been recently attracted to certain experiments made at Havre and L'Orient in France. By a process of electrolisation, sea water was partially decomposed and so became charged with various chlorine compounds. This fluid, if used in the closet flushing cisterns, and sewer flushing tanks, was reputed to keep the sewage free from decomposition. At the end of the year the experiments were incomplete, and the actual benefits to be derived not known.

STABLES, CESSPOOLS, &c.—A complete register of all stables, cesspools, piggeries, offensive trades, &c., has been drawn up during the past year, and records made for future reference.

SANITARY CERTIFICATES.—The demand for these continues to grow ; 149 new certificates were issued in 1893, compared with 100 in 1892. At the end of the year 399 houses had been placed on the Register and a large

number were in hand for future certification. The requirements for the certificate were codified during the year and printed, and new forms of certificate were authorised and issued. Numerous inquiries were received from Sanitary Authorities of other towns as to the requirements and procedure of certification.

ANALYSIS.—During the year 49 samples of food were submitted to the Borough Analyst, only 4 (less than 8 per cent.) being certified as adulterated. Legal proceedings were instituted in three cases, each offender being convicted and fined. The two milk cases were based on samples taken from a retailer and his wholesale supply. Inasmuch as the retailer had no written guarantee he suffered for the offence of the wholesale dealer.

The 6 samples of water include samples from the town mains and from certain private supplies. The polluted supply was dealt with without legal proceedings, and the town mains are now being extended to the premises from which the water was taken. The town supply has been found excellent on all occasions, but the hardness still remains excessive. During the drought there was a slight change in the composition of the water, there being less hardness and more salt. It would be a boon if measures were taken to reduce the hardness which averages 22 degrees "total" and 11 "permanent."





APPENDIX.



TABLE I.

Year.	Population estimated at middle of year	Births registered.	Deaths registered.			
			At all ages.	Under 1 year.	Under 5 years.	In Public Institutions
1893	39,020	897	576	130	231	91
1883	23,996	810	356	101	140	28
1884	25,192	848	350	97	124	40
1885	26,447	922	386	92	160	31
1886	27,765	889	443	124	164	38
1887	29,148	848	355	99	142	30
1888	30,600	780	421	89	137	46
1889	32,124	790	416	98	147	72
1890	33,724	735	485	81	161	111
1891	35,405	857	468	103	158	74
1892	37,168	921	505	153	181	73
Average of 10 years... ..	30,156	840	418	103	151	54

Returns of "Inhabited houses" and "Marriages" not available.

TABLE 2.

								Decennial Averages (corrected)	Theoretical Table.	Returns for 1893.
Population								30,156	39,020	39,020
BIRTHS.	Males							547.0	547	478
	Females							539.8	540	419
	Totals							1086.8	1087	897
	Birth-Rate							28.41	27.86	22.99
DEATHS.	Males							269.6	270	281
	Females							271.9	272	295
	Totals							541.5	542	576
	Both sexes { Under 1 year							134.2	134	130
	1-5 years							61.7	62	101
	5-15 "							33.2	33	34
	15-65 "							188.5	189	180
	65 and upwards							123.8	124	131
	Visitors							40.0	40	78
	Corrected Totals ...							501.5	502	498
DEATH RATES.	Uncorrected Death-rate...							13.93	13.89	14.76
	Corrected Death-rate ...							12.60	12.86	12.76
	Infantile Mortality ...							122	123	144
	Zymotic Death-rate ...							2.37	2.22	3.71
CAUSES OF DEATH, &c.	Zymotic Diseases. { Miasmatic Diseases							59.59	60	113
	{ Diarrhoeal...							30.83	31	39
	{ Septic ...							6.70	7	4
	{ Other Zymotic ...							2.45	2	2
	Dietic Diseases ...							2.58	3	4
	Parasitic Diseases ...							0.64	1	1
	Constitutional Diseases. { Malignant Diseases							25.28	25	25
	{ Phthisis ...							48.76	49	39
	{ Other Tubercular Diseases							31.08	31	16
	{ Other Constitutional Diseases							13.93	14	17
	Developmental Diseases. { Premature Birth							25.15	25	15
	{ Other Developmental Diseases							5.54	6	6
	{ Old Age ...							19.35	20	21
	Local Diseases. { Apoplexy ...							24.51	25	25
	{ Other Nervous Diseases							24.25	24	23
	{ Diseases of Circulatory System							42.69	43	42
	{ " Respiratory System							87.20	87	92
	{ " Digestive System							33.92	34	32
	{ " Urinary System							15.22	15	16
	{ " Reproductive System							5.41	5	5
	{ Other Local Diseases							4.25	4	2
	Accident and Violence ...							14.44	15	16
	Ill-defined Causes ...							12.25	12	14
	Not Certified ...							4.38	4	7
Inquests held								23.09	23	29
Deaths in Public Institutions ...								70.04	70	91

NOTE.—The "Theoretical Table" is constructed by correcting the decennial averages for the increase in the population, and by calculating the various rates from such averages on the population at the middle of 1893.

TABLE 3.

DIVISION I. (All ages).	Total Deaths.	Deaths per 1,000 of population.	Deaths per 1,000 deaths at all ages.
1. Principal Zymotic Diseases ...	140	3.58	243
2. Pulmonary Diseases	92	2.35	159
3. Principal Tubercular Diseases ...	48	1.48	83
DIVISION II. (Children under 1 year).	Total Deaths.	Deaths per 1,000 births.	Deaths per 1,000 of total deaths under 1 year.
4. Wasting Diseases	27	30.10	277
5. Convulsive Diseases	10	11.14	77

NOTES.—1. Includes Measles, Scarlet Fever, Diphtheria, Whooping Cough, Typhus, Enteric and Simple Continued Fevers, and Diarrhœa.

3. Includes Phthisis, Scrofula, Tuberculosis, Rickets, and Tabes.

4. Includes Debility, Atrophy, Inanition, Want of Breast Milk, and Premature Birth.

5. Includes Hydrocephalus, Infantile Meningitis, Convulsion, and Teething.

TABLE 4.—Estimated population—39,020.

						Jan. to March.	April to June.	July to Sept.	October to Dec.	Year 1893.
BIRTHS.	Males ... ..	...	...	...	...	125	131	122	100	478
	Females ... ..	...	...	...	...	107	100	105	107	419
	Totals ... ..	...	...	...	...	232	231	227	207	897
	Birth-rates per 1,000 of population	...	...	...	...	24·11	23·74	23·08	21·05	22·99
SICKNESS.	Diphtheria ... ..	...	...	...	...	11	18	14	15	58
	Erysipelas ... ..	...	...	...	...	12	12	10	7	41
	Scarlet Fever... ..	...	...	...	...	11	58	101	48	218
	Enteric „ ... ..	...	...	...	...	6	...	8	2	16
	Puerperal „ ... ..	...	...	...	...	1	...	...	...	1
	Relapsing „ ... ..	...	...	...	...	...	1	...	...	1
	Totals ... ..	...	...	...	...	41	89	133	72	335
	Sickness-rates per 1,000 of population	...	...	...	...	4·28	9·11	13·53	7·32	8·58
DEATHS.	Males ... ..	...	...	...	...	63	90	28	46	281
	Females ... ..	...	...	...	...	77	80	64	74	295
	Totals, gross	...	...	...	...	140	170	146	120	576
	Non-Residents	...	...	...	...	11	22	30	15	78
	Totals, corrected	...	...	...	...	129	148	116	105	498
	Both Sexes { Under 1 year ... ..	...	...	...	...	27	40	45	18	130
	at ages. { 1-5 years... ..	...	...	...	...	22	44	27	8	101
	{ 5-15 years ... ..	...	...	...	...	7	13	5	9	34
	{ 15-65 years ... ..	...	...	...	...	47	42	42	49	180
	{ 65 and over ... ..	...	...	...	...	37	31	27	36	131
	Death-rates per 1,000 { Gross	...	...	...	...	14·55	17·42	14·84	12·20	14·76
	of population { Corrected	...	...	...	...	13·40	15·57	11·89	10·68	12·76
	Infantile Death-rates per 1,000 births	...	...	...	...	116	173	196	87	144
CAUSES OF DEATH, &c.	Zymotic Diseases. { Miasmatic Diseases ... ..	...	...	...	...	26	54	25	8	113
	{ Diarrhoeal Diseases ... ..	...	...	...	...	1	3	32	3	39
	{ Septic Diseases ... ..	...	...	...	...	1	...	2	1	4
	{ Other Zymotic Diseases ... ..	...	...	...	...	1	1	...	...	2
	Parasitic Diseases ... ..	...	...	...	...	...	...	1	...	1
	Dietic Diseases ... ..	...	...	...	...	...	1	2	1	4
	Constitutional Diseases { Malignant Diseases ... ..	...	...	...	...	8	5	5	7	25
	{ Phthisis ... ..	...	...	...	...	6	8	13	12	39
	{ Other Tubercular Diseases ... ..	...	...	...	...	3	7	3	3	16
	{ Other Constitutional Diseases ... ..	...	...	...	...	7	4	3	3	17
	Developmental Diseases { Premature Birth ... ..	...	...	...	...	3	6	...	6	15
	{ Other Developmental Diseases ... ..	...	...	...	...	1	2	1	2	6
	{ Old Age ... ..	...	...	...	...	5	6	4	6	21
	Local Diseases. { Apoplexy ... ..	...	...	...	...	7	4	7	7	25
	{ Other Nervous Diseases ... ..	...	...	...	...	7	6	6	4	23
	{ Diseases of Circulatory System ... ..	...	...	...	...	10	8	11	13	42
	{ „ Respiratory System ... ..	...	...	...	...	30	31	6	25	92
	{ „ Digestive System... ..	...	...	...	...	6	9	10	7	32
	{ „ Urinary System ... ..	...	...	...	...	2	3	5	6	16
	{ „ Reproductive System ... ..	...	...	...	...	3	1	...	1	5
	{ Other Local Diseases ... ..	...	...	...	...	4	...	1	...	2
	Deaths from Accident and Violence	...	...	...	...	1	4	4	4	16
	„ „ Ill-defined Causes	...	...	...	...	3	7	3	1	14
	Not Certified... ..	...	...	...	...	5	...	2	...	7
	Inquests held ... ..	...	...	...	...	10	8	7	4	29
	Deaths in Public Institutions	...	...	...	...	24	25	25	17	91
METEOROLOGY.	Barometer { Mean Reading ... ..	...	...	...	...	29·991	30·085	29·997	29·998	30·012
	{ Maximum Reading ... ..	...	...	...	...	30·478	30·475	30·305	30·729	30·729
	(corrected) { Minimum Reading ... ..	...	...	...	...	28·796	29·378	29·324	28·951	28·796
	Thermometer { Mean ... ..	...	...	...	...	42·3	55·2	61·8	46·9	51·6
	{ Maximum ... ..	...	...	...	...	56·6	79·2	80·6	63·3	80·6
	(Fahrenheit) { Minimum ... ..	...	...	...	...	21·4	34·7	42·8	27·5	21·4
	Total rainfall, inches	...	...	...	...	6·69	1·37	10·80	10·35	29·31
	Mean humidity per cent. (saturation 100)	...	...	...	...	85·0	76·3	81·4	84·6	81·8
	Bright Sunshine, hours recorded	...	...	...	...	323·8	755·3	596·5	252·6	1928·2
	Wind, prevailing direction...	...	...	...	...	W	NE	W	W	W
	„ mean hourly velocity	...	...	...	...	11·3	10·7	9·5	14·5	11·5

TABLE 5.

A condensed term of Table III. of the series adopted by the Society of Medical Officers of Health, containing all the deaths registered within the Borough during 1893

	1-0	1-5	5-15	15-25	25-35	35-45	45-55	55-65	65-75	75-85	85 and over	GRAND TOTAL.	Sanitary Districts.		
													East.	Centr'l	West.
I.—SPECIFIC FERTILE OR ZYMOTIC DISEASES	56	66	12	3	2	4	5	2	3	5	..	158	83	24	51
II.—PARASTIC DISEASES	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
III.—DIETIC DISEASES	..	..	..	..	..	1	2	..	1	..	..	4	2	..	2
IV.—CONSTITUTIONAL DISEASES	..	..	5	12	19	6	11	11	15	2	..	97	31	25	41
V.—DEVELOPMENTAL DISEASES	..	..	1	..	..	..	..	..	..	10	9	20	16	4	22
VI.—LOCAL DISEASES	..	26	13	7	9	14	25	36	43	33	4	237	83	55	99
VII.—DEATHS FROM VIOLENCE	..	1	3	..	3	1	2	3	2	..	..	16	5	3	8
VIII.—DEATHS FROM ILL-DEFINED AND NOT SPECIFIED CAUSES	..	..	..	..	1	..	..	..	2	..	..	21	11	2	8
	130	101	34	22	35	26	45	52	68	50	13	576	231	113	232
I.—SPECIFIC FEBILE OR ZYMOTIC DISEASES															
1. Miasmatic Diseases.															
Measles	10	38	7	..	..	..	..	..	..	..	..	55	41	5	9
Scarlet Fever	..	4	..	1	..	1	2	2	1	4	..	7	1	..	6
Epidemic Influenza	..	..	..	1	..	..	..	..	..	..	..	11	2	..	8
Whooping Cough	13	14	2	..	..	..	..	..	..	..	..	29	17	5	7
Diphtheria	..	5	3	..	..	..	..	..	..	..	..	8	2	1	5
Enteric or Typhoid Fever	..	..	..	1	..	1	1	..	..	..	..	3	1	..	2
2. Diarrhoeal Diseases.															
Diarrhoea, Dysentery	..	4	..	..	..	..	2	..	2	1	..	39	16	9	14
3. Malarial Diseases.															
Malaria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Zoogenous Diseases.															
5. Venereal Diseases.															
Syphilis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Septic Diseases															
Pyæmia, Septicæmia	..	1	..	..	1	1	..	..	..	..	..	3	..	3	..
Puerperal Fever	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..
II.—PARASTIC DISEASES.															
Worms, Hydatids, and other Animal Parasitic Diseases	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1
III.—DIETIC DISEASES.															
Chronic Alcoholism	..	..	..	..	1	1	2	..	..	..	..	3	1	..	2
Delirium Tremens	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..
IV.—CONSTITUTIONAL DISEASES.															
Rheumatic Fever, Rheumatism of Heart	..	..	2	..	..	..	..	1	1	..	..	2	..	2	2
Rheumatism	..	..	..	..	..	..	..	..	..	..	..	3	..	1	1
Gout	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..
Rickets	..	1	2	..	..	..	..	..	..	..	..	3	3	1	..
Cancer, Malignant Disease	..	..	..	..	2	2	5	7	8	1	..	25	10	6	9
Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	..	3	2	1	..
Tubercular Meningitis, Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	8	6	..	4
Phthisis	3	5	1	..	1	4	6	1	..	..	..	10	9	10	20
Other forms of Tuberculosis, Scrofula	1	..	2	10	16	..	..	..	1	..	..	39	1	2	..
Anæmia, Chlorosis, Leucocythæmia	..	..	..	1	..	..	..	1	2	..	..	4	..	1	3
Glycosuria, Diabetes Mellitus	..	..	..	1	..	..	..	..	3	..	..	4	..	2	2
V.—DEVELOPMENTAL DISEASES.															
Premature Birth	15	..	1	..	..	..	..	..	..	..	..	15	12	1	2
Atelectasis	..	1	..	..	..	..	..	..	..	..	..	2	..	1	1
Congenital Malformations	3	1	..	..	..	..	..	..	..	..	..	4	2	..	2
Old Age	..	..	..	..	..	..	..	..	2	10	9	21	2	2	17
VI.—LOCAL DISEASES.															
1. Diseases of Nervous System.															
Inflammation of Brain or Membranes	..	1	..	..	2	..	..	..	..	..	..	4	2	1	1
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis	..	..	1	..	..	1	3	4	9	7	..	25	11	7	7
Insanity, General Paralysis of Insane	..	..	..	..	..	..	..	1	..	..	..	2	..	..	2
Epilepsy	..	..	..	..	..	..	..	..	..	..	..	2	..	1	1
Convulsions	6	1	..	..	..	..	..	..	..	..	..	7	4	1	2
Laryngismus Stridulus (Spasm of Glottis)	1	1	..	..	..	..	..	..	..	..	..	2	1	..	1
Disease of Spinal Cord, Paraplegia, Paralysis	..	..	..	..	..	1	1	1	1	1	..	3	..	1	2
Agitans	..	..	2	..	..	..	..	1	1	..	..	3	1	1	1
Other Diseases of Nervous System	..	..	..	..	..	..	..	..	..	..	..	3	..	1	1
2. Diseases of Organs of Special Sense.															
(e.g., Ear, Eye, Nose).	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..
3. Diseases of Circulatory System.															
Pericarditis	1	..	..	1	..	..	..	..	..	..	..	1	1	..	..
Valvular Diseases of Heart	..	..	..	..	..	1	3	5	5	..	..	16	6	3	7
Other Diseases of Heart	..	..	..	..	..	..	1	5	6	6	..	18	6	4	8
Anæurism	..	..	..	..	..	1	..	2	2	..	..	3	..	..	3
Embolism, Thrombosis	..	..	..	..	..	..	..	1	..	..	..	3	1	..	..
Other Diseases of Blood Vessels	..	..	..	..	..	..	..	1	1	1	1	3	1	..	2
4. Diseases of Respiratory System.															
Laryngitis	..	1	..	..	..	..	..	1	3	..	..	1	1	..	..
Emphysema, Asthma	..	..	..	..	..	2	4	1	7	10	2	4	3	..	1
Bronchitis	8	1	1	1	..	2	6	5	2	2	1	44	15	9	20
Pneumonia	5	10	4	1	2	4	6	5	2	1	..	42	16	10	16
Pleurisy	..	1	..	..	..	..	..	..	..	..	..	1	1	..	..
5. Diseases of Digestive System.															
Dentition	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1
Diseases of Stomach	..	2	..	1	1	1	..	..	..	..	..	5	..	..	6
Enteritis	1	..	1	..	..	..	4	4	..	..	..	2	2	1	2
Obstructive Diseases of Intestine	..	..	..	..	..	..	1	..	1	1	..	4	2	..	2
Peritonitis	..	3	3	2	..	..	1	..	..	..	..	5	1	3	1
Girrhosis of Liver	..	..	..	..	..	..	3	1	2	..	..	1	1	..	..
Jaundice, and other Diseases of Liver	1	..	..	..	1	..	..	1	1	1	..	7	2	2	3
Other Diseases of Digestive System	..	..	..	1	..	..	..	1	..	1	..	4	..	3	1
6. Diseases of Lymphatic System.															
7. Disease of Gland-like Organs of uncertain use.															
8. Diseases of Urinary System.															
Bright's Disease, Albuminuria	..	..	..	..	..	..	2	5	2	2	..	11	2	5	4
Disease of Bladder and Prostate	..	..	..	..	..	1	1	..	1	2	..	4	..	1	3
Other Disease of the Urinary System	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1
9. Diseases of Reproductive System.															
A. Of Organs of Generation.															
Female Organs	..	..	..	..	1	..	..	..	1	1	..	3	1	1	1
B. Of Parturition.															
Other Accidents of Childbirth	..	..	..	..	..	2	..	..	..	..	..	2	1	..	1
10. Diseases of Locomotive System.															
11. Diseases of Integumentary System.															
Carbuncle, Phlegmon	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..
VII.—DEATHS FROM VIOLENCE.															
1. Accident or Negligence.															
Fractures and Contusions	..	1	1	..	..	..	..	1	1	..	..	4	1	1	2
Burn, Scald	..	..	2	..	2	..	..	..	..	..	..	2	..	..	2
Drowning	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Otherwise	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1
2. Homicide.															
3. Suicide.															
Gunshot Wounds	..	..	..	..	..	..	..	1	..	..	..	1	..	1	1
Poison	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..
Drowning	..	..	..	1	..	..	1	..	1	..	..	2	1	1	1
Hanging	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..
Otherwise	..	..	..	..	..	..	..	..	..	..	..	2	1	..	1
4. Execution.															
VIII.—DEATHS FROM ILL-DEFINED AND NOT SPECIFIED CAUSES.															
Debility, Atrophy, Inanition	..	12	..	..	..	..	..	..	..	..	..	12	4	2	6
Causes not Specified or Ill-Defined	..	1	..	..	..	..	..	..	1	..	..	2	1	..	1
Not Certified..	..	5	..	..	..	..	..	..	..	..	..	7	6	..	1

TABLE 6.

	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	Decennial Averages.		1893	
											Uncor'ect'd	Corrected	Cases	Death-rate.
Small-pox	...	...	1	...	...	...	...	...	...	...	0.10	0.12	...	...
Measles	9	2	12	2	6	...	10	3	...	2	4.6	5.84	55	1.40
Scarlet Fever	1	2	...	1	1	2	...	1	1	1	1.0	1.27	7	0.17
Whooping Cough	4	3	4	21	3	17	2	3	20	3	8.0	10.16	29	0.74
Diphtheria	6	8	15	12	9	13	52	80	33	5	23.3	29.59	8	0.20
Enteric Fever	2	3	4	2	3	4	3	2	2	2	2.7	3.42	3	0.07
Puerperal Fever...	1	1	2	1	2	4	...	1	2	1	1.5	1.90	1	0.02
Other Septic Diseases	5	2	3	5	5	2	3	7	2	3	3.7	4.69	3	0.07
Diarrhoea	22	36	17	39	35	5	20	15	8	37	23.4	29.71	39	0.99
Totals	50	57	58	83	64	47	90	112	68	54	68.3	86.74	145	3.71
Zymotic Death-rate per 1,000 population	2.08	2.26	2.19	2.98	2.19	1.53	2.80	3.32	1.92	1.46	2.73	...	3.71	...

TABLE 8.

Statistics of Sanitary Work during 1893.

For each Sanitary District and for the Borough.

Quarter.	Com-plaints. — No. received during the Year.	Houses cleansed, whitewashed, &c.		Drains.			Water Closets.			Dustbins.		Water Supply.		Waste and Rain Water discharges disconnected from under-ground Drainage.	Removals of accumulations of Dung, Animal, and other Refuse.	Animals removed being improperly kept.	Inspections made of—					
		After Infectious Illness.	For Dirty Condition.	Flushed.	Trapped.	Ventilated.	Repaired, &c.	Water Supply Improved.	New Provided.	New Provided.	Repaired, Covered, &c.	Cisterns (new) Provided.	Cisterns cleaned, Repaired, and Covered.				Bakehouses.	Milkshops.	Fruiters' Shops.	Fish Shops.	Slaughter-houses.	
1st	W.	29	11	1	25	41	56	48	58	37	11	10	19	27	—	15	3	27	30	35	36	24
	C.	31	10	12	92	87	88	46	107	120	55	8	26	43	90	13	3	2	3	4	6	3
	E.	6	15	20	40	40	49	60	140	49	65	20	7	12	20	62	11	19	29	27	13	40
2nd	W.	30	24	3	30	33	40	35	63	17	31	19	14	23	—	21	5	27	30	35	36	24
	C.	40	19	22	59	55	58	68	109	81	60	6	31	41	93	19	3	28	10	6	6	5
	E.	5	31	12	60	30	50	24	80	64	124	14	3	6	11	70	5	30	19	46	27	37
3rd	W.	63	51	3	41	38	57	39	44	36	10	—	25	40	—	26	9	27	30	70	24	24
	C.	53	29	13	48	42	42	46	73	58	32	4	16	32	48	32	4	3	5	13	10	9
	E.	11	39	19	250	14	21	18	112	30	70	9	4	11	6	196	14	11	37	97	42	96
4th	W.	43	27	2	9	22	33	21	65	23	29	17	10	19	—	17	1	27	30	35	24	24
	C.	17	16	7	47	40	41	36	59	62	31	2	27	36	54	16	2	9	1	2	6	3
	E.	9	17	13	70	25	34	42	104	52	105	34	10	5	18	50	13	27	22	30	20	27
Year.	W.	165	113	9	105	134	186	143	230	113	81	46	68	109	—	79	18	108	120	175	120	96
	C.	141	74	54	246	224	229	196	348	321	178	20	100	152	285	80	12	42	19	25	28	20
	E.	31	102	64	420	109	154	144	436	195	364	77	24	34	55	378	43	87	107	200	102	200
Borough Year 1893.		337	299	127	871	467	569	483	1014	639	623	143	192	295	340	537	73	237	246	400	250	316

TABLE 9.

RETURN OF WORK UNDER FOOD AND DRUGS ACT, &c.

FOODSTUFFS, &c.	Samples taken.	Returned as		Proceedings, &c.
		Genuine.	Adulterated.	
Milk	27	23*	2	2 prosecutions (convictions)
Water	6	5	1 polluted	
Butter	3	3	—	No prosecution
Lard	3	3	—	
Coffee	3	2	1	
Mustard	1	1	—	
Bread	2	2	—	
Tartaric Acid	1	1	—	Prosecution (con- viction)
Citric Acid	1	1	—	
Olive Oil	1	1	—	
Vinegar	2	2	—	
Brandy	1	—	1	
Gin	1	1	—	
Whisky	3	3	—	
Total	55	48	5	

* Two samples were received by the Analyst in a state rendering examination impossible.

TABLE 10.
LEGAL PROCEEDINGS.

Offences.	Cases reported to Sanitary Committee.	Proceedings taken in — instances.
Default made in complying with notices :—		
To abate nuisances—general	33	7
To cleanse dirty houses, etc.	0	0
To abate overcrowding... ..	1	0
Removal of hogwash at illegal hours	1	1
Houses unfit for human habitation... ..	1	1
Exposure of infected persons	4	2
Food adulteration	4	3
Refusal to admit to premises	2	2
Refusal to allow removal to hospital	1	1

All cases taken into Court terminated in favour of the Sanitary Authority.

TABLE II.

METEOROLOGY FOR 1893.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year	
BAROMETER (in Inches) (corrected)														
Mean	30.074	29.764	30.163	30.157	30.071	30.027	29.932	30.063	29.897	29.951	29.991	30.052	30.0	
Maximum	30.452	30.438	30.478	30.475	30.422	30.444	30.305	30.295	30.290	30.475	30.439	30.729	30.7	
Minimum	29.542	28.796	29.718	29.935	29.614	29.378	29.551	29.712	29.324	29.276	29.053	28.958	28.7	
Total Oscillation	7.037	8.272	4.563	2.975	2.923	4.726	5.738	3.668	4.889	5.096	8.376	9.120	67.3	
THERMOMETER (Fahrenheit)														
Mean	37.4	43.2	46.4	50.5	55.6	59.4	62.3	64.4	58.6	53.8	44.2	42.6	51.1	
Maximum	50.0	53.3	56.6	65.2	70.0	79.5	74.4	80.6	73.5	63.3	59.0	55.4	80.0	
Minimum	21.4	32.4	30.3	34.7	44.0	42.0	52.0	48.6	42.8	32.6	31.0	27.5	21.1	
Mean Daily Range	7.1	8.1	12.1	12.9	11.4	12.4	9.8	11.4	11.5	10.0	10.1	9.2	10.0	
RAINFALL (Inches)														
Total	2.44	3.90	0.35	0.13	0.78	0.46	4.96	0.98	4.86	5.48	2.77	2.20	29.3	
No. of Days of Rain	16	19	3	1	8	6	14	10	18	20	20	18	15	
No. of Days of Snow	5	—	—	—	—	—	—	—	—	—	1	—	6	
SUNSHINE (Hours)														
Total Record	38.9	72.1	212.8	274.3	217.6	263.4	204.2	247.4	144.9	125.6	62.3	64.7	1928	
No. of Sunny Days	16	17	27	30	31	29	29	31	29	25	18	21	30	
HUMIDITY—per cent. (Saturation—100)	84.8	89.7	80.6	74.9	78.3	75.9	82.6	79.7	81.9	82.7	84.1	87.0	81.1	
WIND														
No. of Times Observed.	N.	9	2	9	15	7	2	3	7	4	3	16	10	87
	N.E.	4	2	7	15	9	12	3	3	7	1	6	2	71
	E.	4	3	3	8	9	13	7	5	5	1	4	—	69
	S.E.	4	5	—	3	3	2	2	2	—	—	3	1	28
	S.	5	5	2	1	3	3	1	3	1	3	1	7	38
	S.W.	5	18	8	1	11	7	16	11	13	16	8	17	137
	W.	9	17	11	4	8	11	15	18	19	19	12	13	150
	N.W.	17	3	9	2	6	2	6	5	8	12	8	10	88
	Calm	5	1	13	11	6	8	9	8	3	7	2	2	74
Prevailing Direction	N.W.	W.	N.W.	N.E.	S.W.	E.	W.	W.	W.	W.	N.W.	W.	W.	
Mean hourly velocity in miles	10.0	16.0	8.0	10.2	10.3	9.9	9.5	8.7	10.2	11.0	17.2	15.4	11.1	

TABLE IIA.
METEOROLOGY.
Averages 1888—1892.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
OMETER													
Mean	30·089	30·062	29·869	29·896	29·917	30·008	29·935	29·935	30·093	29·894	29·991	30·058	29·999
Absolute Maximum	30·738	30·718	30·613	30·479	30·334	30·463	30·399	30·322	30·500	30·664	30·638	30·629	30·738
„ Minimum	29·287	29·167	28·856	29·261	29·311	29·250	29·470	29·264	29·566	29·157	28·692	29·112	28·692
Mean Oscillation	6·557	5·819	7·116	4·904	4·517	4·188	4·792	5·547	4·360	6·444	5·955	6·990	67·192
RMOMETER													
Mean	40·1	39·2	48·0	45·4	52·6	57·4	59·0	60·7	58·6	50·9	47·6	41·6	49·5
Absolute Maximum	55·6	53·8	57·0	64·4	73·0	78·0	70·4	75·6	76·4	65·0	60·0	58·2	78·0
„ Minimum	19·4	20·0	20·0	29·4	33·5	41·0	40·3	46·0	43·0	35·0	17·0	19·0	17·0
Mean of Daily Ranges	8·7	9·7	10·0	10·3	11·0	11·1	9·7	10·1	10·6	11·2	8·7	9·2	10·0
NFALL													
Mean	2·09	1·62	2·49	2·04	1·48	1·95	3·48	3·74	1·48	4·98	2·92	2·26	30·54
Mean No. of Days Rain	14	8	11	11	9	10	14	15	9	17	14	12	144
„ „ Snow	1	3	3	—	—	—	—	—	—	—	—	1	8
SHINE													
Mean	64·4	79·0	107·7	160·1	233·2	203·7	194·1	180·4	175·6	126·4	51·2	62·6	1638·4
Mean No. of sunny days	21	19	24	27	29	27	29	28	27	24	17	18	28·8
IDITY													
Mean	86·8	85·6	84·6	83·6	82·6	84·0	84·1	83·3	82·0	83·5	87·4	85·3	84·4
ND													
N.	9	12	10	10	6	8	5	4	8	7	7	8	94
N.E.	4	8	8	10	8	7	3	3	4	3	2	5	65
E.	2	4	4	6	5	3	4	1	2	3	4	4	42
S.E.	3	3	1	2	3	1	1	1	2	2	4	5	28
S.	5	2	4	3	4	3	3	4	3	6	7	4	48
S.W.	10	3	10	8	12	12	13	16	11	12	9	9	126
W.	14	9	13	9	8	15	21	20	14	13	11	12	159
N.W.	9	11	7	5	5	4	6	4	7	11	8	8	84
Calm	6	6	5	7	11	7	6	9	9	5	8	7	86
Prevailing direction	W	N	W	W	W	W	W	W	W	W	W	W	W
n hourly velocity in miles	14·1	14·3	14·9	12·1	10·7	11·2	12·6	13·2	10·3	14·5	13·4	14·2	12·9

OFFICE WORK DURING 1893.

Calls and Communications received and entered ...	...	...	...	2,308
Letters and Reports written ...	...	...	...	1,026
Dust Complaints received ...	...	...	...	180
Entries made in Inspectors' Journal...	...	...	...	691
Entries made in Register of Defects and Nuisances	...	...	...	619
Notices Issued ...	...	...	...	775
Entries made in Register of Samples taken	...	...	...	55
Returns of Inspectors' Work, notices issued, &c., made to Committee ...	...	...	...	21
Entries made in Notification Register	...	...	...	336
Entries made in Voluntary Sanitary Register	...	...	...	137
Sanitary Certificates Issued ...	...	...	...	149



*To the Chairman and Members of the Sanatorium
Committee.*

GENTLEMEN,

During the year ended 31st December, 1893, 205 cases were received at the Sanatorium. On the 1st of January, 1893, seven patients were under treatment, viz : scarlet fever 6, diphtheria 1, and on the 31st December 21 cases of scarlet fever and 1 case of diphtheria were in the hospital. During the twelve months there were seven deaths from all causes, a mortality of 3·6 per cent. of the 190 cases 'completed' during the year. The subjoined statement gives a resumé of the admissions, discharges, etc. :—

	In Hospital on 1st Jan., 1893.	During the year 1893.			Under treatment 31st. Dec., 1893.
		Admissions.	Deaths.	Discharges.	
Diphtheria	1	16	2	14	1
Scarlet fever	6	166	4	147	21
Enteric fever	—	7	1	6	—
Other cases	—	16	—	16	—
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Totals.....	7	205	7	183	22
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

A complete analysis of the admissions, etc., for each quarter and of the sexes and ages of the patients is contained in Tables I.-III. appended to this report.

During the past year the resources of the Hospital have been very severely tested by the outbreak of scarlet fever during the summer months. Between June and October 121 cases of this disease were admitted. I have no notes of the average daily numbers but during July there were over 60 patients under treatment for several days. The Hospital has accommodation for 46 patients, but out of this total 10 beds were necessarily reserved for other diseases such as diphtheria or enteric fever. Increased accommodation was secured by the erection of marquees on the upper lawn, which were put up in the first weeks of July and taken down in October. Although the heavy rainstorms of the latter half of the summer soaked through the double canvas roof and walls on more than one occasion, I am pleased to say that none of the patients occupying the marquees took any harm. The use of tents

for infectious diseases has been for some years very generally recommended, but in the case of scarlet fever the risks of chill might lead one to hesitate to adopt tents for such purposes. My experience of the past summer will enable me to recommend the use of tents in future emergencies without fear of ill consequences. It should be possible to use them during the winter, if the canvas were properly waterproofed and suitable means of warming devised.

Very shortly after the return of certain scarlet fever patients to their homes, cases of that disease occurred among their relatives and were generally attributed to the patients. These cases, commonly known as "return cases" have been a cause of much anxiety to various hospital authorities. The Medical Officer of Health at Nottingham reported the occurrence of such cases in his annual report for 1892, and I thereupon wrote to him. He informed me that he had observed return cases after about 4 per cent. of the discharges of scarlet fever patients. The Medical Officer of Health at Newcastle had also had return cases but had no notes of the frequency of such cases. The return cases within my own experience occurred in 1892 and 1893. As far as I can learn no cases occurred prior to 1892.

In the hopes of ascertaining the cause of these cases, I investigated the average duration of treatment at the Sanatorium since 1889, *i.e.* as far back as the records extend. I find that in each year since that date, the average duration for the patients, who recovered, was as follows:—

In 1889,	with	7	admissions	and	0	deaths,	the	average	stay	was	40	days
In 1891,	"	12	"	"	2	"	"	"	"	"	44	"
In 1891,	"	8	"	"	1	"	"	"	"	"	40	"
In 1892,	"	34	"	"	1	"	"	"	"	"	57	"
In 1893,	"	145*	"	"	4	"	"	"	"	"	61	"

Such an increase in the duration of isolation would eliminate all chance of return cases—all other things being equal. Gaining no information as to the cause of cases in this direction, I considered the manner of discharge. Prior to 1893 the patients about to be discharged were bathed in the ward corridor by the ward nurse and dressed in the ward serving room. The clothes provided were usually those worn in the Hospital which were disinfected in the apparatus (Washington Lyon) ready for the patient to put on after the disinfecting bath. In

*For the present purpose the cases (21) under treatment December 31st are neglected.

September last, the new discharge room was taken into use, and now the patient strips off the clothes worn in the Hospital in one room, passes to the bath and finds (as a rule) new clothes ready to be put on in the third room. The patient is attended at this discharge room by a special nurse who has put on a non-infected uniform. Since September last no "return cases" have been reported. It is, perhaps, too early to be quite assured of safety, but I hope no more cases will occur in the future. If the new system should ultimately prove to have stopped return cases, the explanation that I should suggest of their occurrence prior to September, 1893, is that, owing to the wards being unusually full, the air, walls etc. of the scarlet fever block were never free from the scarlet fever poison and that the patient became re-infected whilst dressing after the discharge bath.

The new system of ambulance work commenced, in part, in 1892 has worked well. As the economy of working the ambulance and disinfecting van by our own horse and man was much debated, I give below a statement of the initial outlay, working expenses, and also the cost of the work if the system of contract had been continued.

INITIAL OUTLAY.						£	s.	d.
Cost of horse (including loss on first animal)						43	19	10
Cart for goods for disinfection						44	0	0
Harness						6	6	6
Chaff Machine						2	17	6
						<hr/>		
						£97	3	10
						<hr/>		

WORKING EXPENSES.—Jan. 1st to Dec. 31st, 1893.

Forage (2 horses for 2½ months)						31	15	7
Jobbing extra horse						10	0	0
Uniforms						15	16	9
Wages—Driver						54	12	0
Sundries, including shoeing, repairs, etc. ...						2	18	6
						<hr/>		
						£115	2	10
						<hr/>		

COST OF WORK IF DONE ON OLD SYSTEM.

Removal, patients						90	16	6
Removal, goods (since May, 1893)						138	15	0
						<hr/>		
						£229	11	6
						<hr/>		

The amount saved last year was therefore £115, an economy of *cent. per cent.* It would have been more but that the van was not ready for use until May.

There are also more important advantages in the present system. The removals are effected more quickly by persons accustomed to the work who therefore do it with greater comfort to the patient; the ambulance is available at all times; a trained nurse always goes out with the ambulance taking with her blankets, hot water bottles, food, and stimulants; and lastly no relatives now travel with the patient in the ambulance to the Sanatorium to return home immediately (probably) in the omnibus or other public vehicle. During the year additions have been made to the buildings in the form of a discharge room, the advantages of which I have already indicated, and of a lodge. This latter is not yet in proper use, being occupied by some of the female staff instead of by the men. In October last I presented a report embodying certain other additions and amendments which are in my opinion urgently needed. A Sub-committee has been appointed to consider and report thereon.

There has been very little sickness among the nursing staff during the past year, nothing beyond ailments requiring a few days' rest.

I desire, in conclusion, to express my appreciation of the manner in which all members of the Hospital Staff have performed their duties. The confidence I feel able to place in the experience of the Matron has materially lightened my work. To be non-resident Medical Officer with a daily charge of 50 to 60 cases of fever, in addition to the duties of my other offices, is no slight task, involving as it frequently did last year two or three visits a day at all hours. I desire also to express my gratitude to Dr. Adams, the former Medical Officer, who has done me many kind services and taken charge during my temporary absence.

I have the honour to be, Gentlemen,

Your obedient Servant,

REGINALD DUDFIELD, M.A., M.B.,
Medical Officer.

*Borough Sanatorium,
Eastbourne,*

2nd March, 1894.

RETURN CASES.

Chief facts noted in each case:—

CASE 1.—A. F. Admitted 3rd June, 1892; discharged 12th September. In hospital 101 days (owing to recurrent attack of fever). Case reported in her family after her return home. No date of this attack obtained.

CASE 2.—E. P. Admitted 2nd October, 1892; discharged 18th November. In hospital 47 days. Went to Hastings until 7th January, 1893, then returned home. On January 14th two sisters sickened, 7 weeks after E. P.'s discharge.

CASE 3.—H. W. Admitted 26th October, 1892; discharged 31st December. In hospital 66 days. Went straight home; brother sickened 9th January, 1893, and two other relatives a day or two earlier.

CASE 4.—L. B. Admitted 5th November, 1892; discharged 29th December. In hospital 54 days. Returned home at once; brother joined him 31st December, and sickened 5th January, 1893.

CASE 5.—H. G. Admitted 27th December, 1892; discharged 1st March, 1893. In hospital 64 days. Put into quarantine for 14 days, then returned to school. J. H. in that school taken ill on 27th March.

CASE 6.—E. H. Admitted 14th June, 1893; discharged 26th July. In hospital 42 days. Case notified from the family 1st August.

CASE 7.—W. V. Admitted 16th June, 1893; discharged 5th August. In hospital 50 days. Joined relatives in Berkshire on 6th August; case of fever there on 11th or 12th.

CASE 8.—R. B. Admitted 26 June, 1893; discharged 19th August. In hospital 50 days. Returned home at once; 4 cases in the family, first on 29th August.

CASE 9.—W. D. Admitted 10th July, 1893; discharged 24th August. In hospital 45 days; quarantine for one week. Joined family on 4th September; case on 4th (date of sickening may have been 3rd, day before W. D. joined the family).

CASE 10.—V. S. Admitted 30th June, 1893; discharged 12th September. In hospital 74 days. Returned home 14th September; sister ill on 21st September.

TABLE I.

BOROUGH SANATORIUM ADMISSIONS, 1889—1893.

Age Groups.	1889.					1890.					1891.					1892.					1893.								
	Quarters.				The Year.	Quarters.				The Year.	Quarters.				The Year.	Quarters.				The Year.									
	1	2	3	4		1	2	3	4		1	2	3	4		1	2	3	4										
Diphtheria	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F			
			
				
				
				
				
Scarlet Fever				
				
				
				
				
				
Enteric Fever				
				
				
				
				
				
4 females—Other cases.					0 deaths.	11 males } Other cases.					8 females } 2 deaths.	4 males } Other cases.					3 females } 0 deaths.	4 males } Other cases.					7 females } 0 deaths.	5 males } Other cases.					11 females } 0 deaths.

TABLE 2.

BOROUGH SANATORIUM DEATHS, 1889—1893.

Age Groups.	1889.					1890.					1891.					1892.					1893.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Diphtheria	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M

TABLE 3.
BOROUGH SANATORIUM.
Table of Quarterly Totals and Mortalities 1889-1893.

		1889.			1890.			1891.			1892.			1893.		
		Admissions.	Deaths.	Mortality.	Admissions.	Deaths.	Mortality.	Admissions.	Deaths.	Mortality.	Admissions.	Deaths.	Mortality.	Admissions.	Deaths.	Mortality.
Diphtheria.	Quarter—1	4	2	50	73	19	26	35	6	17	7	2	28	1	—	—
	2	—	—	—	77	18	23	14	5	35	7	1	14	7	1	14
	3	2	1	50	33	7	21	12	5	41	8	—	—	2	—	—
	4	59	25	42	52	11	21	18	5	27	6	1	16	6	1	16
	Year	65	28	43	235	55	23	79	21	26	28	4	14	16	2	12
Scarlet Fever.	Quarter—1	3	—	—	—	—	—	1	—	—	3	—	—	4	—	—
	2	7	—	—	5	1	20	1	—	—	11	1	9	52	2	3
	3	3	—	—	2	1	50	4	1	25	4	—	—	74	2	2
	4	4	—	—	5	—	—	2	—	—	16	—	—	36	—	—
	Year	17	—	—	12	2	16	8	1	12	34	1	2	166	4	2
Enteric Fever.	Quarter—1	1	—	—	—	—	—	1	—	—	2	—	—	1	—	—
	2	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—
	3	3	1	33	1	—	—	—	—	—	5	1	20	6	1	16
	4	4	—	—	4	—	—	3	1	33	—	—	—	—	—	—
	Year	5	1	20	5	—	—	4	1	25	9	1	11	7	1	13
Other Cases.	Quarter—1	—	—	—	7	—	—	5	—	—	3	—	—	5	—	—
	2	—	—	—	4	—	—	—	—	—	—	—	—	3	—	—
	3	—	—	—	5	1	20	2	—	—	6	—	—	5	—	—
	4	4	—	—	3	1	33	—	—	—	2	—	—	3	—	—
	Year	4	—	—	19	2	10	7	—	—	11	—	—	16	—	—
All Diseases.	Quarter—1	8	2	25	80	19	23	42	6	14	15	2	13	11	—	—
	2	7	—	—	86	19	23	15	5	33	20	2	10	63	3	4
	3	9	2	22	41	9	21	18	6	33	23	1	4	86	3	3
	4	68	25	36	64	12	18	23	6	26	24	1	4	45	1	2
	Year	91	29	31	271	59	21	98	23	23	82	6	7	205	7	3

“ Mortality ” calculated as per centage of cases.

Average case mortality 1889-1892... .. 20

Case mortality, 1893 3

(A)

TABLE OF DEATHS DURING THE YEAR 1893, IN THE URBAN SANITARY DISTRICT OF EASTBOURNE,
CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities. (Columns for Population and Births are in Table B.)	Mortality from all causes, at subjoined Ages.								(i)	Mortality from subjoined causes, distinguishing Deaths of Children under Five Years of Age.																					
	At all ages.	Under 1 year.	(c)	(d)	(e)	(f)	(g)	(h)		1	2	3	4	Fevers.					12	13	14	15	16	17	18	19	20	21	22		
														Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.													
West Ward ..	144	30	21	8	6	37	42	Under 5 5 upwds	..	1	2	..	..	..	7	5	11	..	..	8	1	9	..	1	9	..	1	14	51
Central Ward ..	113	22	12	10	5	38	32	Under 5 5 upwds	..	1	1	..	..	..	5	4	1	8	..	..	..	..	..	..	..	9	5	51	93
East Ward ..	228	68	60	11	4	49	36	Under 5 5 upwds	..	1	1	..	..	..	35	17	13	1	..	10	..	11	7	3	1	7	3	46	34
Borough Sanatorium ..	7	1	3	1	1	1	..	Under 5 5 upwds	..	3	1	..	..	..	6	..	3	..	..	9	..	16	12	4	4	47	128		
Union Workhouse ..	42	3	4	2	2	14	17	Under 5 5 upwds	..	1	1	1	1	3	4	
Princess Alice Hospital ..	26	..	..	1	2	20	3	Under 5 5 upwds	..	..	..	..	..	..	1	..	..	..	..	7	..	2	..	..	..	..	..	20	35
All Saints' Convalescent Hospital	5	..	..	..	1	3	1	Under 5 5 upwds	..	..	..	..	..	..	..	..	..	..	..	..	2	6	3	1	1	..	..	14	26
Upwick Vale Home ..	8	6	1	..	1	Under 5 5 upwds	1	..	2	..	1	1	1	5	7	
Station Hospital ..	2	2	..	Under 5 5 upwds	2	2	1
Leaf Homœopathic Hospital ..	1	1	..	Under 5 5 upwds	1	..
TOTALS ..	576	130	101	33	22	159	131	Under 5 5 upwds	..	5	5	..	..	..	48	27	34	..	..	1	38	32	..	2	1	32	..	77	231
									..	2	3	..	..	..	7	2	5	34	..	..	55	34	14	..	55	34	179	345	

The subjoined numbers have also to be taken into account in judging of the above records of mortality.

Deaths occurring outside the district among persons belonging thereto..	..	None	known	..	..	..	..	Under 5 5 upwds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Deaths occurring within the district among persons not belonging thereto, visitors ..	78	4	3	3	4	39	25	Under 5 5 upwds	..	1	2	..	..	..	..	..	..	..	..	1	..	3	..	..	8	9	5	..	3	38	71

(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH, DURING THE YEAR 1893, IN THE URBAN SANITARY DISTRICT OF EASTBOURNE, CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES.

NAMES OF LOCALITIES adopted for the purpose of these Statistics ; public institutions being shown as separate localities.	Population at all Ages.			Aged under 5 or over 5.	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health.													Number of such Cases removed from their Homes in the several localities for Treatment in Isolation Hospital.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	Census 1891.	Estima- ted to middle of 1893.	Regis- tered Births.		1	2	3	4	Fevers.					10	11	12	13	1	2	3	4	Fevers.					10	11	12	13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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West District (H)	..	13,785	12	2	4	3	10

State here whether " Notification of Infectious Disease " is compulsory in the District? Yes. Since when? January, 1890. Besides the above-mentioned Diseases, insert in the columns with blank headings the names of any that are notifiable in the District, and fill the columns accordingly. State here the name of the Isolation Hospital used by the sick of the District? Borough Sanatorium. Mark (H) the Locality in which such Hospital is situated ; and if not within the District, state where it is situated.

*Sixth Annual Report on the Health and Sanitary Condition
of the East Grinstead Local Board District, for the year
ended 31st December, 1893.*

Area, 6,355 acres. Population (census of 1891), 5,180; estimated population to the middle of 1893, 5,250.

In 1893 the deaths of 90 persons at all ages and from all causes were recorded in the district, against 88 in 1892 and 84 in 1891. These 90 deaths were at the rate of 17·1 per 1,000 of the total population of the district. Of this number eight or 7·2 per cent. were of children under one year of age and 42 or 37·8 per cent. were of persons 60 years of age and upwards.

Of the 90 recorded deaths 14 occurred in the Workhouse and four in the Cottage Hospital. Excluding these 18 deaths, the death rate was 13·7. Of the 90 deaths 15 were of persons not residing in the district, but with two exceptions belonged to the rural district, from whence they were sent into the Workhouse or Cottage Hospital. The true death rate for 1893 is therefore 14·2 per 1,000, which, by a curious coincidence, is exactly the same as in the previous year of 1892. This is rather a higher rate of mortality than is natural to the locality and will be presently accounted for. The births numbered 153, of which 97 were males and 56 females, equal to a birth rate of 29·1 per 1,000. This is a lower birth rate than in 1892, when it was 31·1. The deaths of eight children under one year of age were registered and were in the proportion of 5·2 per cent. of those born.

The table of deaths from all causes appended to this report will show you that four deaths were due to the ordinary zymotic diseases and were in the proportion of 3·6 per cent. of the recorded deaths from all causes and at the low rate of ·6 per 1,000 of those living. Of these four deaths one was of a child who contracted typhoid fever at Imberhorne farm, in all probability from drinking the water of a neighbouring well, which was found to be horribly polluted by the putrid bodies of dead rats. There were two deaths from diphtheria; in neither case could any sanitary defects be held accountable for the disease.

The number of cases reported to me under the Notification of Infectious Diseases Act was 146, no less than 102 of these being cases of scarlet fever, generally of a very mild type; 35 of these were reported to me from St. Margaret's Convent and three from the school belonging to St. Margaret's, situate in London-road. This epidemic was a continuation of that which commenced late in the previous year. All the cases were isolated and treated in the infirmary belonging to the Convent. In the urban district as well as at the Convent the very mild nature of the symptoms characterising the cases in this epidemic has made it extremely difficult—in fact impossible—to cope with it successfully. I myself have seen many patients in which the first symptom to attract attention has been the peeling of the skin a week or two after the slight rash had appeared. Often the rash has been so indistinct and evanescent that it has been entirely overlooked or ignored by both patient and friends. Twenty-eight cases of scarlet fever were removed to the fever wards at the Workhouse and in every instance, immediately the nature of the disease was ascertained, prompt measures for removal or isolation were taken and as thorough disinfection as is possible with the means at command was carried out. By my orders the schools at Saint Hill and North-end were closed at different times in consequence of the discovery being made that children had been attending while suffering from scarlet fever. Eighteen cases of diphtheria were reported to me of sporadic distribution, in only three instances were there two cases in the same house and as a rule no communication between the patients could be traced.

A tramp admitted to the Workhouse on March 27th was found next day to be suffering from small-pox. He was at once removed to the isolation wards of the Workhouse, but, in spite of the precautions taken and a pretty general re-vaccination throughout the House, three of the pauper inmates contracted the disorder. These four cases all recovered. This is the first year that measles has been included in the schedule of infectious diseases notifiable in your district and only seven cases have been reported to me, which is somewhat strange, seeing that in the neighbouring villages and districts the disease has been very prevalent. Thirty-five deaths were attributed to diseases of the respiratory organs; of these, six were from phthisis, or consumption. There have been two distinct outbreaks of influenza in the past year; one of these was in the spring, the other in November and December. Only one death was directly attributed to the disease, which, with few exceptions, appeared to attack those who had already suffered two or three times in the previous years of the epidemic. The complaint was of a much milder type, but showed a decided predilection for the lungs, being often complicated by bronchitis or pneumonia. The two latter diseases were very prevalent in the spring and early summer, no less than 29 deaths being registered from these causes. Again, as in the two previous years, I believe the death rate to be raised above its normal level by the large number of cases of pneumonia and bronchitis which appear to be so closely associated with the influenza epidemic. Seven persons died of cancer at an average age of 73, the eldest being 79 and the youngest 69.

Six inquests were held in this district. Two of these were on persons who had committed suicide, two on persons who were proved to have died from natural causes, one on a child of two years accidentally drowned and one on a man who died in the Cottage Hospital from the effects of an accident at Scarlett's Mill; he was thrown out of a cart and broke his spine.

By order of the Local Government Board I drew up for you a report last January on the special precautions to be taken at East Grinstead against the expected importation of cholera. The mention of this subject leads me to the question of providing an infectious hospital. The Board of Guardians having decided to close the fever wards at the Workhouse, are also reported to be about to provide a fever hospital for the convenience of the rural district under their authority, but if they place their hospital four miles off at Lullenden—which appears to be their present intention—you will probably choose to erect a hospital for the urban district nearer the town. It would greatly diminish the usefulness of an infectious hospital to place it in such an inaccessible position. It is a well-known fact that patients object to being removed so far from their relations and parents especially would often refuse to allow young children to be taken so far from home. It can hardly be necessary to provide two infectious hospitals for so small place as East Grinstead, the population of which, including the rural district, does not exceed 16,000. I therefore hope the Board of Guardians may yet see their way to co-operate with your Board in an endeavour to provide a hospital for the joint use of the two Boards in a more convenient situation.

In consequence of a case of diphtheria being reported to me from the head master's house at the East Grinstead Board Schools and knowing that many of the children attending the schools had suffered from sore throat, I made a thorough inspection of the school premises with your inspector. The result of this examination was embodied in a report I sent to you. In due course it was communicated to the School Board. In it I was able to point out many defects, which have since been remedied and I believe the School Board have now under consideration the question of remedying certain defects in the flooring of the school rooms.

Six samples of water were sent to me for analysis. In three of them the water was unfit for use and the wells were ordered to be cleaned. The other three were of good quality. During the past year the district under my control has been thoroughly inspected and where sanitary defects have been discovered the owners have been served with the usual notice to remedy the faults.

The weather of the year was favourable to health, but the unprecedented drought, lasting from the end of February to July and again through August and September, would have been severely felt in the town if the inhabitants had been obliged to depend on their own wells. The extra supply afforded by the new well near Brook House enabled the Water Company to supply their customers more liberally than had been the case in the two or three previous summers. At my house, 448 feet above sea level, the rainfall for the year was 26·82 inches, about seven inches below the average of the last ten years.

PERCY E. WALLIS, L.R.C.P., &c.,
East Grinstead, Medical Officer of Health.
6th February, 1894.

